November, 1956 50 cents

NOV 1956 U.S. FISH AND WILDLIFE SERVICE

PACIFIC FISHERMAN

Nov. '56, a Month To Remember . . p9

Antibiotic Use in Fish Canning . p13

FISH PARADE — An underwater picture of Bristol Bay Red salmon streaming through Fisheries Research Institute photographic counting station at Aleknagik.

A MILLER FREEMAN PUBLICATION

Q. **Who pioneered the vacuum-packing of salmon?**

A. American Can Company! Canco research scientists proved by test packs that thermal exhaust is not necessary to produce a high-quality product.

Q. **Is it true that Canco is a factor in establishing canning standards?**

A. Yes, indeed! For years, Canco has been cooperating with trade associations and government agencies on the problems of fish-canning technology. Canco has also assisted in establishing standards for product quality and plant sanitation.

Q. **What <u>regular</u> services does American Can Company offer to fish canners?**

A. In addition to well-designed, well-made containers, Canco provides competent closing-machine service; prompt supply from conveniently located plants; and technical assistance on every phase of canning.

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PACIFIC FISHERMAN

Vol. 54 No. 12

NOVEMBER 1956

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Publishing Office
534 S.W. 3rd Ave., Portland 4, Oreg. . . . . CApitol 3-6348

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71 Columbia St., Seattle 4, Wash. . . . . MAin 1626

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121 Second St., San Francisco 5	GArfield 1-5887
315 N. Avalon, Wilmington, Calif.	TErminal 4-4538
3518 Dante St., New Orleans 18	AMhurst 2762

Circulation Department: 121 Second St., San Francisco 5, Calif; Charles C. Baake, Circulation Manager.

Send change of address to Circulation Dept.; include old and new address, and zone number.

Subscription rates: U.S., Canada, & Latin America, one year—$3, two years—$5, three years—$7. Other countries: one year—$4.
Postmaster: Send form 3579 to Circulation Department.

ADVERTISING: Complete plates only should be sent to Pacific Fisherman, 235 N. W. Park Ave., Portland 9, Ore. . . . Advertising copy and cuts, instructions and insertion orders should be sent to the Seattle office.

PACIFIC FISHERMAN (with which is combined West Coast Fisheries). Published monthly except January when publication is semi-monthly, by Miller Freeman Publications, at 534 S. W. Third Ave., Portland 4, Ore. Entered as second class matter at the post office at Portland, Ore., under Act of March 3, 1879. Postmaster, please send Notice 3579 to PACIFIC FISHERMAN, 121 Second St., San Francisco 5, California.

A MILLER FREEMAN PUBLICATION

Pink Salmon Treaty Put Squarely up to Congress

● Pink salmon resources of the boundary waters of the United States and Canada may be brought under the investigation and study of the International Pacific Fisheries Commission by the time the Pinks appear off the coast in their biennial run in the summer of 1957.

This new step in the international cooperation of the United States and Canada for the conservation of their shared fisheries will result from agreement reached in Ottawa a few days ago—but it can come only if Congress and Parliament ratify the agreed amendments to the existing Treaty of 1930 promptly.

Otherwise two years will be wasted.

Agreement upon the means by which this extension of international conservation should be undertaken came promptly and with a remarkable show of unanimity. The fishing industries of Washington and British Columbia appear wholly in favor of immediate action which will make the measure applicable in this cycle of the Pink salmon.

To delay action would be inexcusable.

● The Ottawa conference decided that the best way to bring about international conservation of Pink salmon would be simply to include the species within the existing authority of the Salmon Commission.

Charged with the responsibility of maintaining the Pink salmon population at the level of maximum sustainable productivity; and with affecting as far as possible equal division of the catch from convention waters between the fishermen of the two countries, the commission will have the same authority over Pinks as it does over Sockeyes. Regulation may begin as soon as the amendments to the treaty enter into force.

The Salmon Commission is authorized to pursue scientific study of the Pink salmon in convention waters, which continue the same as in the original Sockeye treaty. Beyond this, provision is made for coordinated research conducted in waters frequented by Pink salmon outside the actual convention area. These studies will be pursued by existing research organizations of the governments in authority over the waters concerned. Seven years after the treaty enters into force a conference will consider the scientific implications of this research and the future arrangements which it might indicate with respect to Pink salmon.

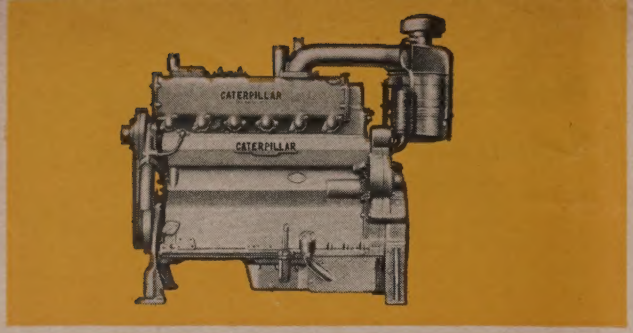
These things were agreed upon and were referred to the drafting technicians of the State Department and Foreign Office to be framed as amendments to the Treaty of 1930. Actual text of these amendments had not become available at presstime.

● The Ottawa conference also took note of the serious threat which offshore net fishing poses to the conservation of both Pink and Sockeye salmon and adopted a resolution calling this matter to the attentions of the governments and recommending immediate action to solve the problem.

Canada is believed to have authority to act in the matter.

The three Pacific states will grapple with the challenge at San Francisco late this month.

If they fail to handle it, or to secure action from their legislatures, the Ottawa resolution may force Congress to take a hand—something the states have earnestly sought to avoid.



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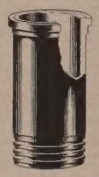

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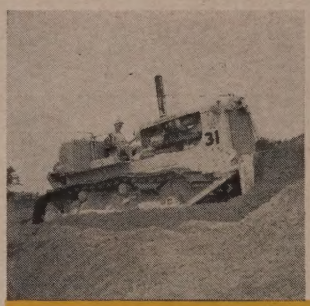

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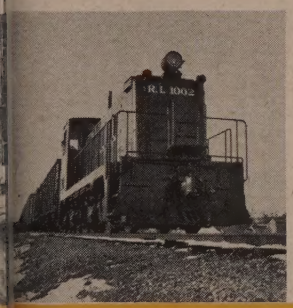

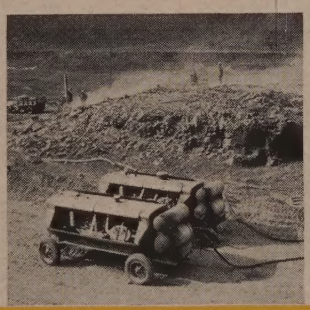

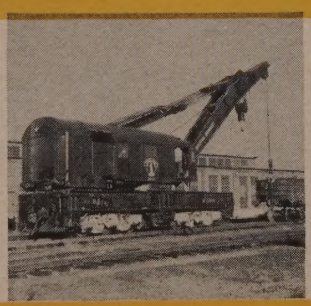

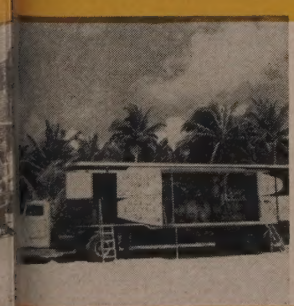

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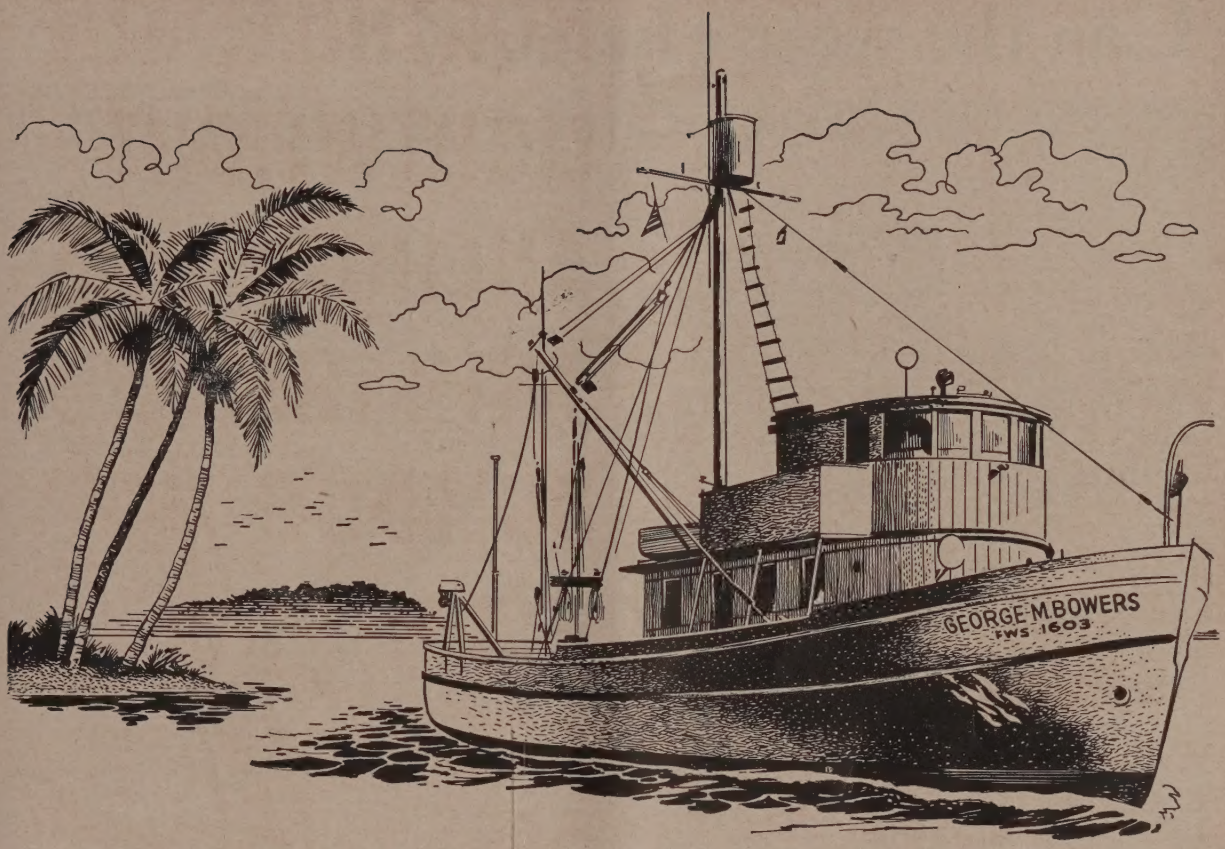


New Fish & Wildlife vessel *features TWIN DISC equipment*

In its continuing research in exploration fishing and gear development fields, the U. S. Fish & Wildlife Service recently launched its latest and most modern "floating laboratory," the 92-ton vessel, the *George M. Bowers.*

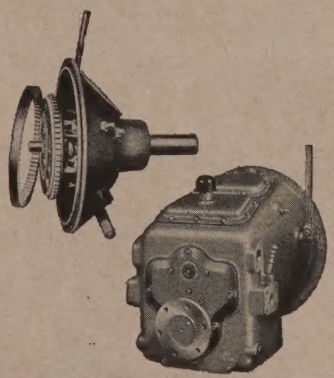
Built by Steam Ways Corporation, Tampa, Florida, to Fish & Wildlife Service specifications, the *George M. Bowers* has a 73-foot length, 21-foot beam and a 7-foot draft. Main propulsion is provided by an Allis-Chalmers Marine Diesel, Model 6-DC-1879 (Buda Div.) rated at 192 hp at 1200 rpm.

Power is transmitted through a Twin Disc Marine Reverse and Reduction Gear having a 3:1 reduction ratio. The vessel can make a continuous speed of 10 mph, and has a cruising range of 5000 miles.

Air controls are used for the engine and marine gear, with the vessel's compressor being driven through a Twin Disc Front Power Take-Off mounted on the propulsion engine.

The *George M. Bowers* is one more example of the use for Twin Disc products in the marine industry. Twin Disc Marine Gears are available in a complete range of capacities, from 40 to 340 hp, from 600 to 2500 rpm.

Specify Twin Disc Marine Gears for your next boat or whenever you repower existing ones.



TWIN DISC
CLUTCHES AND HYDRAULIC DRIVES

TWIN DISC
Marine Gears

TWIN DISC CLUTCH COMPANY, Racine, Wisconsin (Hydraulic Division) Rockford, Illinois

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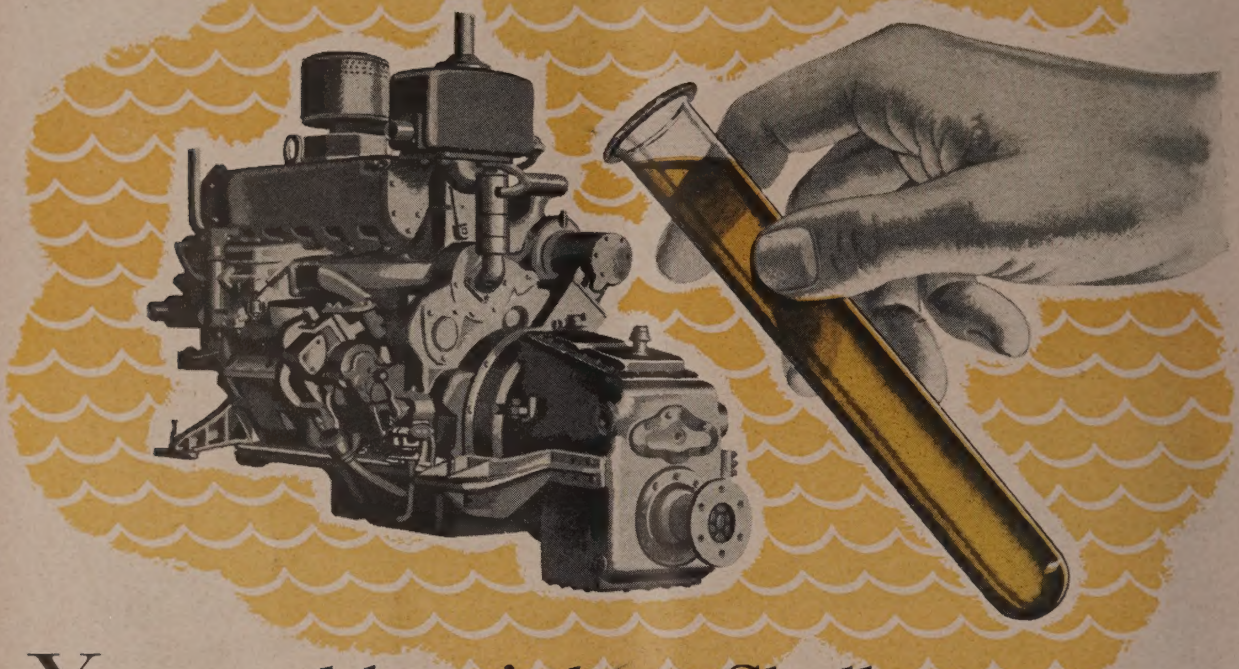

Yes...and here's how Shell men and techniques do it with an oil

Engineers *knew* friction was a major cause of engine wear. But Shell scientists suspected there was a hidden villain—even more destructive.

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A phone call can put this team to work solving your problems. Call your Shell representative today.

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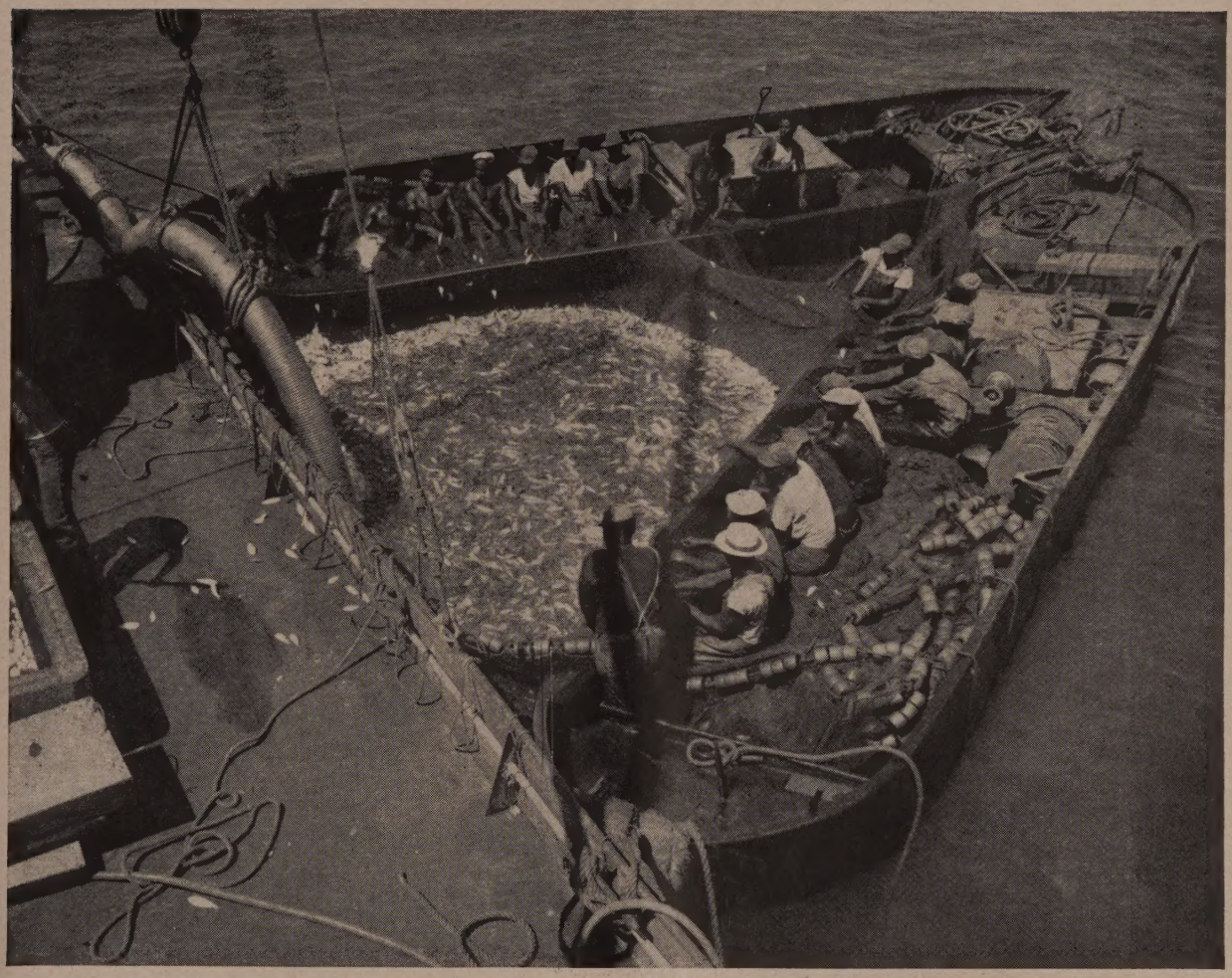

Spongex Floats carry a lot of weight in the Gulf

"Spongex® floats give us what amounts to 300% greater protection from loss of fish . . . nets and time", says Mr. George Castigliola, owner of the Lois Kaye, 128' all-purpose refrigerated flagship of the Castigliola Shrimp Co., Pascagoula, Mississippi.

"We use Spongex floats because we must have floats that hold ½ mile of seine net plus 25 tons of fish in the stiff gulf tide.

"This means", he continued, "our floats must have a buoyancy greater than the ordinary fishing net. They must be of the type to carry weight . . . compounded with a minimum of 100,000 fish at a time. So naturally the less water absorption, the better. We find all these qualities in Spongex floats plus the fact the 20 boys who work the purse boats find the nets 50% easier to handle.

"Net fishing is tricky business. It's easy to lose a net without the added buoyancy of Spongex floats. Once a net goes under, ordinary floats become waterlogged making it impossible to bring the net to the surface.

Mr. Castigliola concluded, "We are now planning a boat that will carry 1,000,000 fish at a trip. It is obvious we will look to B. F. Goodrich floats to buoy-up the larger nets we will need."

Captain Oliver W. Hunnings of the "Lois Kaye" says, "Spongex floats are stronger, longer-lived, and more buoyant than the old-fashioned wood or cork floats. Wood floats grow heavier as they absorb water, and make it tough for the men to haul in the nets during each set. We could only expect 3 seasons of use from wood floats, with the floats being relocated on the net each season . . . closer and closer to the purse boats as they became more and more waterlogged. These Spongex floats have been in use for two seasons and are still

in their original positions. The Spongex floats will also support a heavier load in the nets, since they are more buoyant than wood, thus enabling us to catch more fish in a single set than we would in the past."

For more information write B. F. Goodrich Sponge Products, a division of The B. F. Goodrich Company, 245 Derby Place, Shelton, Connecticut.

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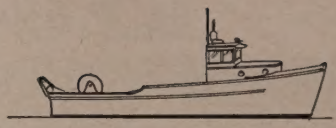

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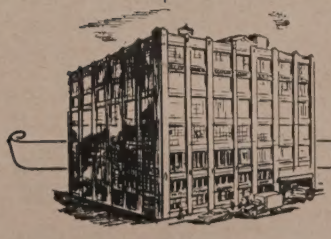

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PACIFIC FISHERMAN NOVEMBER 1956

November 1956

A Month to Remember

• Events of November may influence the Pacific fisheries for a long way into the future.

Perhaps never have so many scheduled actions been arranged for a single month—so many, or so significant.

They concern the arc of the Pacific continents from Southern California all the way to Southern Kyushu, and involve the fisheries, the fishing industries, and fishery administrations of the United States, Canada, Japan and the Soviet Union, the four foremost fishing nations of the world.

Thus November, 1956, is a month to remember.

• Pink Salmon Treaty

Out of Ottawa in the first days of the month was to come proposals for amendment of the Sockeye Treaty between the United States and Canada which will bring a study of Pink salmon within the authority of the International Pacific Salmon Fisheries Commission.

Negotiations to this end were initiated October 22, and were concluded before the end of that month, with proposals in draft form. The finished version and signature are to be expected in November.

The United States delegation, headed by William C. Herrington, U. S. Department of State special assistant for fisheries and wildlife, advocated amendment of the treaty in line with suggestions made by Governor Arthur B. Langlie of Washington, and recommended to him by an advisory committee which studied the matter for many months.

Members of Governor Langlie's Pink Salmon Advisory Committee were: Joseph F. Jurich, International Longshoremen's & Warehousemen's Union; Arthur T. Lee, Northwest Fisheries Association; Jack F. Repanich, Puget Sound fishing and canning industry; Carl A. Nelson, Puget Sound Gillnetters Association; Jerry M. Anderson, Washington Reef Net Owners Association; John S. Wilkinson, Puget Sound Salmon Canners Association; Matt J. Svornich, Purse Seine Vessel Owners Association; Ted Nakkerud, Seafarers International Union; Harry J. McCool, Fishermen's Cooperative Association; Ned P. Krilich, Washington State Sportsmen's Council; Norb James, Lummi Island Indian Tribal Council; Senator Ted G. Peterson and Representative Chet King, Washington state legislature; Dr. Richard Van Cleve, director, School of Fisheries, University of Washington; DeWitt Gilbert, editor, *Pacific Fisherman;* Robert J. Schoettler, director, Washington Department of Fisheries, chairman.

Of the men named, Mr. Schoettler, Mr. Nelson, Mr. Anderson, Dr. Van Cleve, Mr. Repanich, Mr. Wilkinson, together with Milo C. Bell and Edward W. Allen, and representative of the Fish and Wildlife Service and the Department of State, comprised the American delegation headed by Mr. Herrington.

The Sockeye Commission on its own this fall declared the positive need for "international control beyond that provided by the present Sockeye convention," and called for "the right to control fishing in all parts of the convention waters," and "power to separate the commercial fishery waters of the convention in either country by whatever practical units are required."

This leaves the expectation that amendments designed to these ends are to be offered in addition to those primarily concerned with bringing the Pink salmon resources of waters contiguous to the international boundary under the International Pacific Salmon Fisheries Convention.

• Alaska Regulations

Administrative proposals for regulation of the Alaska fisheries in 1957 are being discussed with the industry in Seattle November 7, 8, and 9.

Extension of the area licensing system rather broadly through the fishing areas of the Territory is the principal proposal expected, on the basis of disclosures at the Alaska hearings.

For Southeast Alaska FAWS originally planned three licenses areas. The fishermen objected to this very strongly, preferring that licenses be valid for use throughout the entire Southeast Alaska fishery, regardless of the early and late-run areas. Following extensive hearings in the region, D. L. McKernan, Alaska commercial fisheries administrator, announced that the plan to divide Southeast Alaska would be abandoned for the 1957 season at least, and that area licensing would be applied to the region as a whole.

Service proposals for open seasons generally are expected

to follow closely the pattern of 1956, with cyclic modifications of course.

• North Pacific Treaty Meet

Special significance attaches to the meeting of the International North Pacific Fisheries Commission in Seattle November 12 to 17. This is because:

1. The United States and Canada will make initial submissions of data supporting their cases for continuation of Japan's abstention from the coastal salmon, halibut and herring fisheries off North America.

2. The Soviet Union is expected to be represented by observers.

The plenary meeting of the commission will be preceded by a meeting of its Biology and Research Committee, beginning November 5 and continuing through the full week of the commission meeting. Similarly, the Administrative Committee will meet on November 8.

Meetings of the commission will be held at the Olympic Hotel, and those of the two standing committees at the Fish and Wildlife Service Laboratory and the University School of Fisheries.

Edward W. Allen of Seattle is chairman of the commission.

The American Section is composed of Milton E. Brooding, San Francisco, chairman; John L. Farley, Washington; John H. Clawson, Anchorage; and Mr. Allen.

The Canadian Section includes: George H. Clark, Ottawa; John M. Buchanan and Roger T. Hager, Vancouver; James Cameron, Pender Harbour.

The Japanese Section will include: Kenkichi Nakabe and Iwao Fujita.

Arriving in advance of the main Japanese delegation are Sarari Masuda, chief of the production department of the Japan Fishery Agency, and Dr. Motosaku Fujinaga, chief of the agencies research department. They will represent Japan on the Biology and Research Committee.

• F.T.C. Tuna Hearing

Hearing on the sweeping complaint of the Federal Trade Commission against the Southern California tuna industry was originally scheduled for November 19 at Long Beach. There was a good possibility that the hearing would be postponed, due to concentration of previously scheduled events.

Regardless of this likelihood, the tuna industry in all its branches is preparing its answers to the varied charges of the complaint, which fall into at least four distinct categories.

• States Face Ocean Problem

What to do about high seas net fishing is the prime problem facing the Pacific states at the meeting of the Pacific Marine Fisheries Commission in San Francisco November 26-28.

Actually, the rise of ocean gillnetting, to which the three state fishery administrations have expressed their opposition, raises a problem which challenges the states' authority over the ocean fisheries off their coasts.

This is something that the states don't like to talk about out loud, but it's true nevertheless.

Actually, the Pacific Marine Fisheries was formed by the states, with the approval of Congress, because the states feared that the Department of the Interior was seeking — Harold Ickes then being secretary — to assert its authority over ocean fisheries off the coasts of the Pacific states.

Through the Tri-State Commission, California, Oregon and Washington have been undertaking to control their ocean fisheries in a way which leaves no reason for the Federal government to take over. Hitherto the problem has not been too difficult, but the threat of ocean gillnetting, *with its international implications,* is a thorny threat which the states must handle or call-in the Feds, with the surrender of state authority which that action entails.

Off-shore gillnetting seems to have few friends in North America.

The American Section of the North Pacific Commission has declared that such exploitation endangers the commission's effort to maintain a conservation program on the high seas.

Acting in response to this request from the American Section, the Fish and Wildlife Service has prohibited ocean net fishing for salmon off the Alaska coast.

Canada has promised to do likewise, *if* the Pacific states take concurrent action.

The Federal government has asked the three Pacific states' Department of Fisheries if they oppose ocean netting. The answers were unanimous: "Yes."

Then the Federal government asked the states: "Can you translate your opposition into control and/or prohibition?"

That's what the Tri-State Commission has to answer in San Francisco this month. If the states can't do it under their present authority, they have one more out—they can ask their 1957 legislatures *for* that authority.

If they don't get it, what then?

Then you can expect Congress to act.

Actually, it could be quite simply accomplished. The Enabling Act which put the North Pacific treaty into effect, and under which ocean netting off Alaska was prohibited, could be amended to give the Secretary of the Interior the necessary authority. Now his power is limited to waters contiguous to the coast of Alaska.

As a matter of fact, this is a rather embarrassing point for the Pacific states. Originally the Enabling Act provided that the Secretary of State could regulate American fisheries as requested by the American Section throughout treaty waters.

The states objected. This was their province. The bill as proposed was an invasion of states' rights. They could and would handle any problems arising.

Well, it looks as if they are going to have the chance.

If the states don't have, and can't get, the means for effective action, you can expect Congress to move next spring.

• C.F.C.A. Meeting

The annual meeting of the California Fish Canners Association will be held at Ojai, Calif., November 14-16.

While the program is essentially a social one, with a golf tournament for the Miller Freeman Trophy, there can be little doubt that the problems raised by the Federal Trade Commission complaint against the tuna industry will come in for a lot of informal discussion.

• Salmon Convention

Following the pattern of recent years, the annual meeting of the Association of Pacific Fisheries and the Northwest Branch of the National Canners Association will be a one-day affair held at Seattle November 27.

It is expected that the meeting this year will be concerned primarily with proposals of a committee headed by Charles D. Alhadeff of Whiz Fish Products Co. for reorganization of the association. The committee was appointed by President E. E. Murray early this fall and has made a thorough study of the organizational requirements of the salmon industry. It is expected to suggest means by which the industry can more effectively marshal its forces.

Tuna's Production Pace Runs Ahead of Last Year

● Star-Kist's big Plant Four, Terminal Island, closed for a short time, in October for repair work, the High Seas cannery, San Diego, a part of the Star-Kist family, working on bait boat deliveries.

Van Camp Sea Food Co., Terminal Island, also had a temporary shutdown on tuna in mid-October.

Canned tuna production from Southern California plants was considerably ahead of that for 1955, comparable period. As of August, 1956 FAWS figures indicate that 6,933,843 cases (standard) had been packed. Approximate September figures for case pack show that 802,520 cases of tuna had been canned, all species, not converted to standard cases.

With three months yet to go on tuna's production table, it would appear that 1956 might out-distance 1955, which had a case pack of 8,207,-698; and 1954 had 9,176,928 at the end of the year. However, since the tuna purse seine season, except for the few "regulars", is over, and since canneries are curtailing sailings and unloadings, it may be that the canned pack of tuna from California will hit about the 1955 mark.

Tuna specialty packs for the first eight months of 1956 fell off: 18,982 compared to 30,624. The total pack of tuna-and-noodles, etc., for the year 1955 was 38,312.

Yellowfin used in light meat packs, in the first nine months of 1956, exceeded the tonnage received by Southern California canneries for the same period in 1955. Interestingly enough, the amount of Yellowfin imported for the first nine months of 1956 exceeds that of tonnage for 1955. But Japanese Albacore is far less than that for 1955.

California Fish Canners Association was scheduled to hold its annual meeting at Ojai November 14-16. From that meeting should come a summary of the progress of the California fish canning industry.

All in all, the outlook for the Southern California fish canning industry, with its concentration on tuna, sardines and mackerel, as the year draws to a close, is not bad, production and sales-wise. From the standpoint of tonnage and price, it will not be a bonanza year, experts agree, but neither will it be a "famine".

Tuna-in-Brine Imports Near Quota Limit

Under the quota regulation of imports of tuna-in-brine, dating from April 16 to September 29, 20,745,940 lbs. have been sent to the United States. This leaves a balance of 8,011,-453 lbs. permitted to come into the country as of December 31 at the 12½% duty. When the imports reach 28,757,393 lbs., any imports in excess of this amount will be subject to a duty of 25% ad valorem.

Modest Sardine Fishing Marks Southern Opening

● Sardine fishing in Southern California opened with modest production —1,500 tons for the first real night of fishing. This was October 8, when agreement was reached between the boat owners and the fishermen's union as to price.

This by the fishermen's understanding was $47.50 per ton for sardines and $42.50 for "mixed fish", which includes sardines and mackerel together.

Fishermen's Cooperative Association, San Pedro, negotiating for its individual members, concluded discussions with individual canneries, October 7. There probably will be a fleet of about 150 net boats netting sardines.

Currently, the situation is this on mixed fish: canners will accept 40 tons of sardines from member boats of their fleet and/or 20 tons of mixed fish. Mixed fish always present a problem to canners, because of the variation in size between mackerel and sardines.

Straight jack has been sold at $42.50; $45.00 for Pacific. Anchovies rate at $25 a ton. To date, about 15,000 tons of anchovies have been delivered; more than 18,000 tons of Jack; and more than 8,000 tons of Pacific.

Van Camp Sea Food Co., operating without a contract with the cooperative or individual boats, was said to have offered $52.50 to vessels which customarily fish for that company, for straight sardines only. The company was not interested in buying "mixed fish" at the time.

The Monterey seiner *Pacific Star* went ashore in a heavy fog the first night of fishing, striking near Point Fermin. Capt. Sam Lonero got his craft afloat without assistance and she made the Al Larson boat yard under her own power for repairs.

First fishing of the season found the sardines close to shore.

The September pack of mackerel and anchovies in Southern California produced 60,723 cases and 13,793, respectively. There is a limit on canning of anchovies for a season, beginning with April 1, 1956.

Thus far, from the opening of the Northern California season, about 2500 tons of sardines have been trucked from the Port Hueneme-Santa Barbara area to the few Northern California canneries still in operation.

The Tuna Producers' View

● "We believe that quotas can be fairly used as an instrument of meeting emergency situations and as a long-range approach to a trade problem. . . .

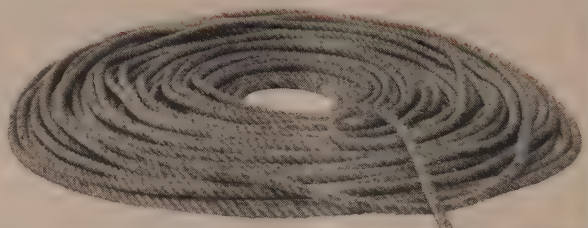
"The trade policy of the United States is to expand and improve our relationships without bringing serious injury to an American industry. The Trade Agreements Act is renewed from time to time in furtherance of this policy.

"The tuna producer has seen an expansion of tuna trade bought at the cost of a decline in his own business.

"The trade policy of the United States is not implemented as far as the tuna producer is concerned".

—Concluding paragraphs of the statement of Harold F. Cary, general manager of the American Tunaboat Association, before the Sub-Committee on Customs, Tariffs and Reciprocal Trade Agreements, House Ways and Means Committee, Sept. 25, 1956.

7 New Lyco Trawlers



All Columbian Equipped!

The launching of seven, 67-foot, 63-ton shrimp trawlers for the new Lyco fleet of Aransas Pass, Texas, marks three notable highlights in the shrimp and boat-building industries:

- Each of the seven new Lyco boats is equipped with Columbian Manila rope;
- F. K. Lytle, Texas shrimp producer, is the first newcomer to the shrimp industry to build seven boats at one time;
- The new fleet completes the 575th shrimp trawler built in a sensational five-year program by Diesel Engine Sales, Inc., of St. Augustine, Fla., all equipped with Columbian Rope.

Columbian Manila Rope is specially made to withstand the rigors of trawling use. The famous Columbian Anti-Rot treatment makes the strong, resilient fibres highly resistant to the most destructive organisms of rot and decay. And each Columbian fibre is individually water-proofed, each inch is wear and abrasive resistant, providing long, safe, dependable service.

Pacific fishermen will find Columbian Rope — both Manila and Nylon—equally efficient on their vessels

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Potential Application of Antibiotics In the Salmon Canning Industry

This research project was sponsored jointly by the Alaska Packers Association and Chas. Pfizer and Company, Inc. This paper, which is believed to be the first report ever made on the use of antibiotics on fish for canning, was prepared for reading by Dr. Stern at the Fourth Annual Symposium on Antibiotics, sponsored by the Division of Antibiotics, U.S. Food and Drug Administration.

By
Joseph A. Stern
Harmon L. Liebman
Robert E. Munkelt
Byron Hatherell

● The five species of salmon belonging to the family *Salmonidae* and the genus *Oncorhynchus* which inhabit the waters along the North Pacific Coast are the most valuable fishery resource of North America. The Sockeye or Red salmon (*Oncorhynchus nerka*), with which this paper is concerned, is perhaps the most important of the five species. The average pack of Sockeye for the years 1945 to 1955 was slightly greater than 1,750,000 standard cases of 48 pounds each with a total value of approximately $50,000,000.

The Sockeye salmon occur from the Columbia River to the Yukon River and from Bering Strait to Japan, with Bristol Bay, Alaska, the greatest producing area of this species in the world. Other important producing regions are the Fraser River system in British Columbia, parts of Alaska and parts of Siberia.

A major problem facing the canners of Sockeye salmon, as well as the entire salmon canning industry, is the storage of fresh fish prior to canning.

The Sockeye, like all species of the genus *Oncorhynchus*, are caught in quantity only during a very short period when they gather in great schools preparatory to their spawning migration. This period varies, depending upon locality, from one week to one month. The number of Sockeye salmon which may be taken in a given area is regulated by state or federal law. The limitations are accomplished by the use of multiple open and closed fishing seasons during this period. Because of the nature of, and the legal restrictions upon, the fishery a canner is faced with periodic gluts and shortage of fish. He must, of necessity, be prepared to handle the large numbers of fish (up to a million a day) which may be received at the cannery. The cost of this type of preparation is excessive, involving extra manpower, food and equipment, much of which must be transported by air.

● Protection Problem

In addition, by the time the fish are received at the cannery, they may have been held, in the round, for considerable times at temperatures well above those considered suitable for the retardation of spoilage. Most Sockeye are caught by gill net or purse seine boats, although some are caught by set nets and traps. The fish, when caught, are generally stored at ambient temperatures in the bottoms of the catcher boats until they are delivered to a tender. These tenders are large self-powered scows or barges which are stationed close to the fishing grounds. Delivery is made to the scows by the catcher boats about once a

Dr. Stern and Mr. Liebman are of the technological faculty of the University of Washington School of Fisheries. Mr. Munkelt and Mr. Hatherell are research scientists on the staffs of Charles Pfizer and Company and the California Packing Corporation respectively.

TABLE 1

Organoleptic judgements of raw and canned salmon stored at 32°F. in refrigerated brines containing various concentrations of oxytetracycline and chlortetracycline.

Days in Solution	Concentration of Antibiotics									
	5 ppm oxytetracycline		10 ppm oxytetracycline		20 ppm oxytetracycline		5 ppm chlortetracycline		control	
	raw(a	canned(b	raw(a	canned(b	raw(a	canned(b	raw(a	canned(b	raw(a	canned(b
3	1	1	1	1	1	1	1	1	1	1
6	1	1	1	1	1	1	1	1	2	1
9	1	1	1	1	1	1	1	1	2	1
12	2	1	2	1	2	1	2	1	4	1.5
15	3	1.5	3	1	3	1.5	3	1.5	5	2
18	3+	2.5	3+	2	3+	2	3+	2	6	3
21	3.5	2.5	3.5	2	3.5	2	3.5	2	7	3
24	3.5	2.5	3.5	2	3.5	2	3.5	2.5	--	--
27	5	3	5	3	5	2.5	5	3	--	--

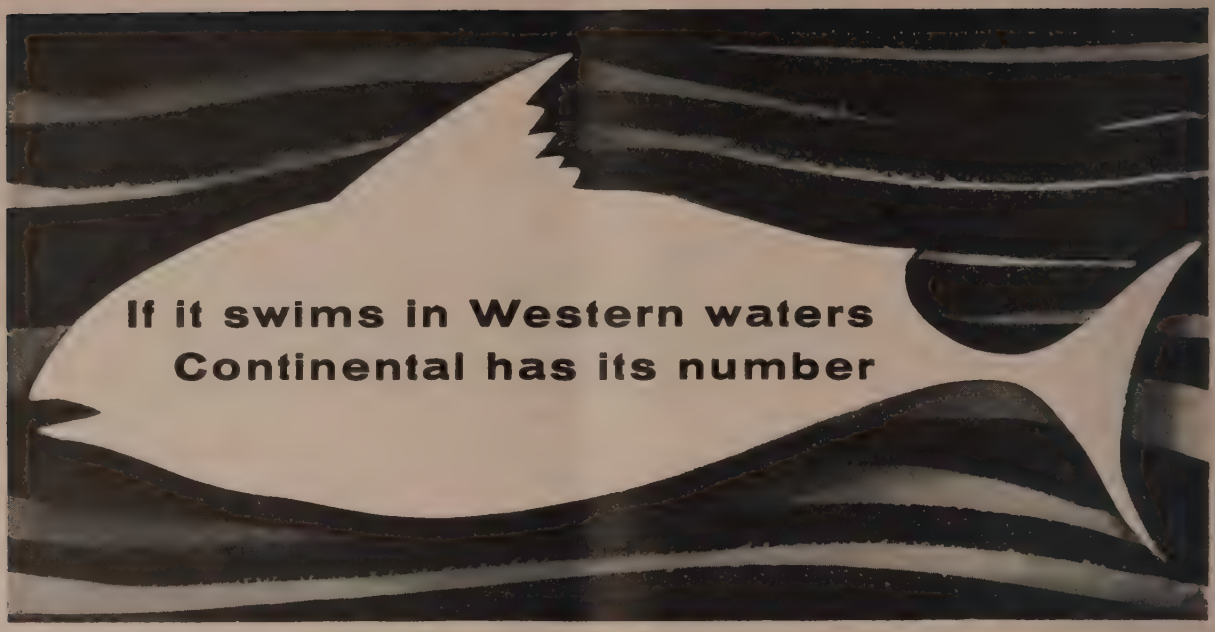
TABLE 2

Organoleptic judgements of raw and canned salmon stored at 40°F. in refrigerated brines containing various concentrations of oxytetracycline and chlortetracycline.

Days in Solution	Concentration of Antibiotics									
	5 ppm oxytetracycline		10 ppm oxytetracycline		20 ppm oxytetracycline		10 ppm chlortetracycline		control	
	raw(a	canned(b	raw(a	canned(b	raw(a	canned(b	raw(a	canned(b	raw(a	canned(b
1	1	1	1	1	1	1	1	1	1	1
2	1	1	1	1	1	1	1	1	1	1
3	1	1	1	1	1	1	1	1	2	2.5
5	1	2	1	1	1	1.5	1	1	3.5	3
7	2	3	2	2.5	2	2	2	2	5	3.5
9	3	3.5	3	3	3	3	3	3	8	4.5
11	3.5	4	3	3.5	3.5	3.5	3.5	3.5	--	--
13	6	4	6	4	6	4.5	6	3.5	--	--
14	8	--	8	--	8	--	8	--	--	--

a) Raw grading based on an 8 point scale:
1 = excellent
2 = good
3 = fair
4 = fair to poor
5 = poor
6 = unacceptable
7 = definitely spoiled
8 = definitely putrid

b) Canned grading based on a 4 point scale:
1 = good
2 = fair
3 = poor (stale)
4 = bad (taint to putrid)



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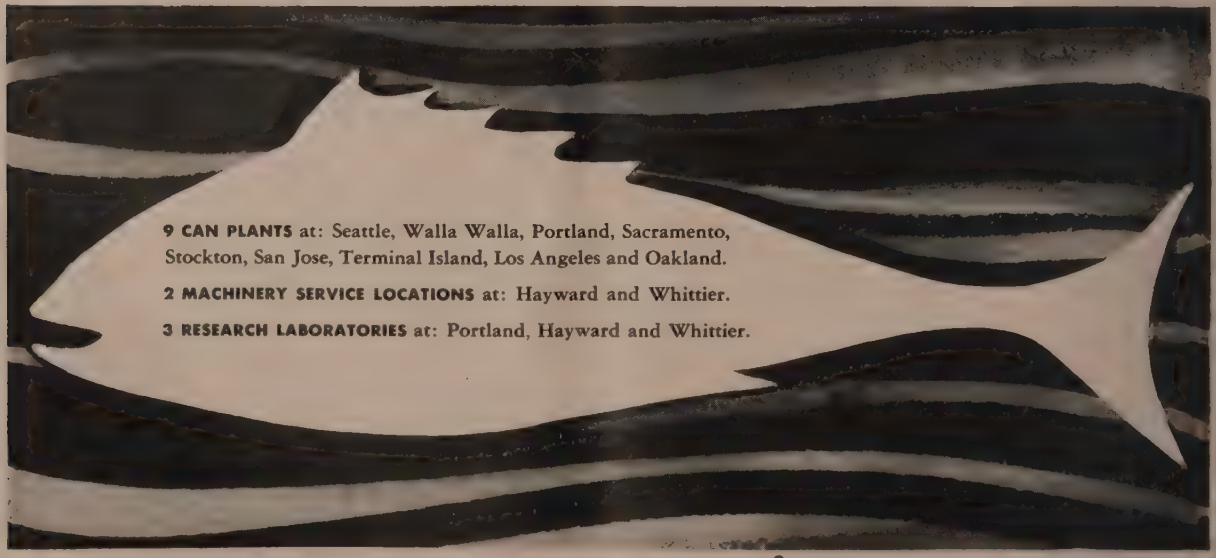
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2 MACHINERY SERVICE LOCATIONS at: Hayward and Whittier.
3 RESEARCH LABORATORIES at: Portland, Hayward and Whittier.

TABLE 3

Organoleptic judgements of raw and canned salmon stored at 50°F. in refrigerated brines containing various concentrations of oxytetracycline and chlortetracycline.

Days in Solution	Concentration of Antibiotics									
	5 ppm oxytetracycline		10 ppm oxytetracycline		20 ppm oxytetracycline		20 ppm chlortetracycline		control	
	raw(a	canned(b	raw(a	canned(b	raw(a	canned(b	raw(a	canned(b	raw(a	canned(b
1	1	1	1	1	1	1	1	1	1	1
2	1	1	1	1	1	1	1	1	2.5	1
3	1	1	1	1	1	1	1	1.5	4	2
4	2.5	2	2.5	2	2.5	2	2.5	2	5	3.5
5	4	3	4	3	4	3	4	3	7	4.5
6	6	3.5	6	4	6	3.5	6	3.5	--	--
7	8	--	8	--	8	--	8	--	--	--

b) Canned grading based on a 4 point scale:

1 = good
2 = fair
3 = poor (stale)
4 = bad (taint to putrid)

TABLE 4

Organoleptic judgements of raw and canned salmon sprayed with different concentrations of oxytetracycline solutions and held in air at room temperature.

Days After Spray	Treatment									
	Control		100 ppm Spray		Control		20 ppm Spray		2nd 20 ppm Spray	
	raw(a	canned(b	raw(a	canned(b	raw(a	canned(b	raw(a	canned(b	raw(a	canned(b
1	1	1	1	1	1	1	1	1	--	--
2	4	1.5	2	1	3	2.5	1	1	1	1
3	7	4.5	3	1.5	6	3.5	5	3.5	2.5	2.5
4	--	--	5	3.5	10	--	8	--	6	--
5	--	--	8	3.5	--	--	--	--	--	--

a) Raw grading based on an 8 point scale:

1 = excellent
2 = good
3 = fair
4 = fair to poor
5 = poor
6 = unacceptable
7 = definitely spoiled
8 = definitely putrid

day. Aboard the tender, the fish are stored in the hold or on the deck until the tender returns to the cannery. This, in some cases, may be as long as 12 hours after the first receipt of fish. As a result, fish arriving at the cannery may be between two and 36 hours out of water. The majority of canneries handling Sockeye salmon store the fish in large wooden bins prior to the canning operation. In general, in none of these operations are the fish exposed to temperature other than ambient (60°F. to 80°F.).

One possible answer to the problem is refrigeration, but this solution is not always feasible, particularly in Alaska. The cost of machinery, the cost of transportation of machinery and fuel, and the cost of power prohibit the large scale use of refrigeration in certain areas. However, several attempts to use refrigerated brine systems have been made. A few canneries have built and are operating tenders with circulating refrigerated brine. At least one shore installation uses storage tanks with circulating refrigerated brine as a cooling medium. The cost of such installations is high but for the most part where they have been used, they have been successful in extending the storage life of the fish and smoothing out the highs and lows of the supply of raw fish during the canning periods.

Recent work has demonstrated the preservative effects of the tetracycline-group of antibiotics on fish and other protein foods. It has been shown also that these antibiotics are heat liable. Therefore, because it is difficult to apply refrigeration economically in this industry and, because practically all Sockeye are heat processed, it was felt that an investigation of the use of the tetracycline-group of antibiotics was warranted. A series of experiments was designed to test the effectiveness of various concentrations of oxytetracycline and chlortetracycline in extending the storage life of Sockeye salmon. Different temperatures and varying conditions of storage as well as different means of application of the antibiotics were examined.

• Experimental Procedure

All experiments were carried out at the Semiahmoo Cannery of the Alaska Packers Association in Blaine, Washington. Conditions approximating those normally encountered in commercial practice were simulated as closely as possible.

There are three places in the line of production of canned Red salmon where the antibiotics could be applied; first aboard the fishing boats; second, aboard the tenders, and third, at the cannery. Because of the cramped and difficult conditions commonly encountered aboard the fishing vessels employed in the Sockeye fishery, it was felt that it was not practical or possible to apply the antibiotics in any manner aboard these boats. It was believed that the first possible point of application of the antibiotics would be on board the tenders. However, because of the vagaries of wind, weather and waves, the most probable point of application would be when the fish are first received at a shore installation.

Our experiments were divided into three categories; first, the storage of round or uneviscerated Sockeye salmon in refrigerated brines; second, the storage of round Sockeye salmon at air temperatures, and third, the storage of round Sockeye salmon in ice. Each experiment had an internal control.

The refrigerated brine experiments were carried out using three temperatures of storage, 32°F, 40°F., and 50°F. The 32°F. temperature was chosen since it is a temperature easily obtainable with sea water plus a minimum refrigeration installation. The 40°F. temperature was chosen for it is a temperature which closely approximates that of sea water obtainable offshore both in Alaska and in the Puget Sound area. In Bristol Bay, the inshore water is quite muddy and to obtain clear water for cannery use it is necessary to barge sea water from distances as great as 12 miles offshore. Generally, such water is at a temperature of 40° to 45°F. The 50°F. temperature which was chosen for it is a temperature which closely approximates those of the river and inshore waters normally encountered in the Bristol Bay area.

• Brine Experiments

For the refrigerated brine storage experiments, two large wooden tanks were constructed, each 6' in diameter and 5' in depth. Each tank was equipped with its own refrigeration, circulatory and control system. Five 55-gal. steel drums were placed in each tank (see Figure 1). The inside of each drum had previously been coated with a microcrystalline wax. A large bag of polyethylene laminated to cellophane was placed in each drum. Sea water which was to serve as the cooling medium was pumped into the outer tank and allowed to circulate continuously over the refrigerated coils.

Shortly before the fish were added, the plastic bags were half filled with sea water to achieve the desired storage temperature prior to the addition of fish. This water was obtained at high slack tide to reduce the chance of pollution. In the 32°F. to 40°F. experiments, ice and salt were added to the drums with fish in order to rapidly attain storage temperatures. The antibiotics were added to the sea water in the bags immediately before the addition of fish.

All fish used in the brine storage experiments were seine-caught fish obtained from a tender upon arrival at the cannery dock. These fish were placed in storage the same day as caught. The age of the fish prior to experimental storage varied from six to 20 hours.

The concentrations of antibiotics used in the 32°F. brine storage experiment were 0, 5, 10, and 20 ppm of oxytetracycline and 5 ppm of chlortetracyline hydrochloride based on

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the weight of the brine. The concentrations of antibiotics used in the 40°F. brine storage experiment were 0, 5, 10, and 20 ppm oxytetracycline and 10 ppm chlortetracycline hydrochloride. In the 50°F. brine storage experiment, the concentrations of antibiotics used were 0, 5, 10, and 20 ppm oxytetracycline and 20 ppm chlortetracycline hydrochloride.

• Air and Ice Tests

The air temperature storage experiments were designed to determine if any advantage could be gained by earlier treatment of the fish since it has been indicated previously that antibiotics are most effective when applied soon after death when the bacterial content is lowest. As soon as the fish were received aboard the tender they were sprayed by means of a watering can. In the first experiment, a sea water solution containing 100 ppm of oxytetracycline was used as a spray. The control was sprayed with sea water.

In the second experiment, a sea water solution containing 20 ppm of oxytetracycline was used as a spray and again the control was sprayed with sea water. A second spraying of a 20 ppm solution of oxytetracycline in sea water was given to part of the fish the day following the original spraying.

The fish in both these experiments were stored dry in boxes covered with a plastic bag.

The third experiment—that of iced storage of salmon—was carried out using fish delivered to the cannery by a tender. In this experiment the salmon were stored in ordinary flake ice and in flake ice containing 5 ppm of oxytetracycline. All ice used in this experiment was manufactured at the cannery by a Belt-Ice machine. The fish were stored in boxes and were heavily iced. The boxes were re-iced frequently with the respective ices.

All of the experiments were carried out in the same area of the cannery, i.e., the fresh fish storage area. Temperatures in each experimental lot of fish were continuously recorded by means of thermocouples and a 16 point strip-recorder.

• Canning of Samples

At periodic intervals, extending over the entire storage life of the fish, samples were removed, graded organoleptically, cut and filled into half-pound flat cans by hand. Each can was hand salted. The cans of fish then were sealed and processed in the standard cannery manner.

In the brine and iced storage experiments, four fish were taken at each sampling period. In the spray experiments two fish were taken at each sampling period. One steak from each fish in a sampling was taken for chemical and bacteriological analyses. These steaks were comminuted, mixed and filled into half-pound flat cans. The cans were sealed and frozen. The chemical and bacteriological analyses of these samples are now being carried out.

TABLE 5

Summary of brine storage and spray experiments based on organoleptic judgements of canned samples.

Storage Conditions	Concentration of Antibiotic	Days Rated Good	Days Until Rated Poor
32°F. Brine	Control	12	15
	5 ppm oxytetracycline	15	24
	10 ppm oxytetracycline	15	24
	20 ppm oxytetracycline	15	27
	5 ppm chlortetracycline	15	24
40°F. Brine	Control	2	3
	5 ppm oxytetracycline	3	5
	10 ppm oxytetracycline	5	7
	20 ppm oxytetracycline	5	7
	10 ppm chlortetracycline	5	7
50°F. Brine	Control	2	3
	5 ppm oxytetracycline	3	4
	10 ppm oxytetracycline	3	4
	20 ppm oxytetracycline	3	4
	20 ppm chlortetracycline	3	4
Room Temperature Spray	Control	2	2
	100 ppm oxytetracycline	3	3
	Control	1	2
	One Spray 20 ppm oxytetracycline	2	2
	Two Spray 20 ppm oxytetracycline	2	3

The judging of the raw salmon was made by qualified cannery personnel, as well as by some of the authors. The fish were judged on the basis of the condition of the eyes, the color and odor of the gills, the condition of the viscera and visceral cavity, the odor of the visceral cavity, the texture or firmness of the flesh, and the odor of the flesh. An over-all judgment of the fish in each sampling was established, based on an eight point scale of excellent, good, fair, fair to poor, poor, unacceptable, definitely spoiled, and definitely putrid.

Two weeks after the last sample of salmon was canned an organoleptic examination was conducted on representative cans of all the experimental packs. The judges were experts from the salmon canning industry. The judging was on an open basis, i.e., the judges were aware of what they were examining. The salmon was graded on a four point scale of good, fair, poor or stale, and bad or tainted to putrid. These judgments were made by two groups of three judges, each group working independently of the other. The judgments were based on the over-all acceptability of the samples as opposed to individual facets of quality.

The results of the organoleptic judgments both of the raw fish and of the canned samples are presented as Tables 1 to 4.

• Results and Discussion

The preservative effects of the antibiotics were evaluated by means of two sets of judgments, one on the raw fish, the second on the canned. Tables 1 to 4, which present both these judgments, demonstrate that difficulties would be encountered in estimating the quality of the final product from the quality of the raw fish. The correlation between the two judgings is good when the fish are very fresh or very poor. When the fish enter the state of incipient spoilage, judgment of the raw quality becomes difficult and the correlation between judgings is poor. This is demonstrated by the fact that fish judged in the raw state as grade 3 or fair were judged, in the canned state, to be in all classifications of good to bad.

Since the final judgment of whether a product is good or bad must be

made on the quality of the final product, the majority of our conclusions are based on the organoleptic judgments of the canned salmon. Table 5 presents these results in terms of acceptable quality with respect to time of storage. Canned samples rated from 1 to 2, in Tables 1 to 4, were good, while samples graded from 2 to 3 were considered suitable for canning and acceptable. All samples graded 3 and higher were considered not suitable for canning and unacceptable.

Table 5 shows that *the antibiotics not only extend the over-all storage life of the salmon but also extend, for a short time, the period when the salmon is judged as good.* The maximum extension of storage life, in days, occurred in the 32°F. brine storage experiment. Here the antibiotics increased by three days the time of storage where the fish were rated good, and the over-all storage life by nine days.

Similar proportional extensions of storage life were found for the salmon stored in all of the antibiotic solutions in the 50°F. brine storage experiment and for those fish held in the 5 ppm oxytetracycline brine at 40°F. Greater proportional extensions of storage life were found for the fish stored in the solutions containing 10 ppm oxytetracycline, 20 ppm oxytetracycline and 10 ppm chlortetracycline hydrochloride at 40°F. In none of these cases, however, did the extension in days approach that encountered in the 32°F. brine storage experiment.

It is important that neither the color nor the texture of the fish in the brine storage experiments were adversely affected by prolonged storage in solution until the fish were well beyond the stage where they were considered unsuitable for canning.

In none of the brine storage experiments did we find any indication in the canned samples of a major difference in the effects of the different antibiotics where comparative concentrations of chlortetracycline were used. In the organoleptic judgments made on the raw fish no differences were found between the fish stored in the various antibiotic solutions in any particular experiment. It appears, therefore, that oxytetracycline and chlortetracycline were equally effective in preserving the salmon in the brine storage experiments.

With but one exception, the organoleptic examination of the canned samples showed all concentrations of the oxytetracycline in each experiment to be equally effective in extending the storage life of the Sockeye salmon. The exception was the salmon stored at 40°F. and in the 5 ppm oxytetracycline brine. The reason for this anomaly in the results is unknown but could be speculated upon at length.

The room temperature storage experiments demonstrated an extension of storage life could be obtained by spraying the salmon with an antibiotic solution when the fish were first received aboard the tender. Approximately one day's extension of storage where the salmon were rated good was obtained by a single spraying of the fish with a high concentration of oxytetracycline (100 ppm). A similar result was obtained by the use of the two-spray technique and a lower concentration of the antibiotic. An additional day of extension in over-all storage life was obtained by the use of the latter procedure.

The results of the iced storage experiment are inconclusive. Some portions of the experimental procedures were subject to question and consequently the data have not been presented.

In many cases the canned samples were given a poor rating because of the presence of rancid flavors and odors. The presence of these rancid flavors and odors demonstrate that the flesh and fat of the salmon underwent autolytic and chemical changes as well as changes due to microbial action possibly other than bacterial. The presence of these rancid flavors and odors emphasize that the antibiotics are not a panacea in themselves and their use must be considered in proper perspective to the over-all handling procedures involved in preparing and preserving foodstuff.

If all factors were taken into consideration, it is our opinion that with the proper use of antibiotics it would be possible to establish a safe range of storage many times greater than that now generally obtainable commercially.

Antibiotic Protection For Fish Cleared in Canada

• Aureomycin may be used to protect the freshness of fish in Canada under permission granted by the Canadian government's health department in October. This is regarded as an advance of the utmost importance to the fishing industry, which has been seeking such authority in the United States, where use of the antibiotic in the processing of fresh poultry has been permitted for some months.

The research in employment of aureomycin (chlortetracycline) in keeping seafood fresh longer was pioneered by Dr. Hugh L. A. Tarr, director of the Pacific Fisheries Experimental Station in Vancouver, who found that nearly all spoilage organisms in fish are sensitive to aureomycin.

J. E. Holmested, manager of North American Cyanamid, Ltd., Montreal, which developed the process commercially, says that Acronize, the company's specific derivative of aureomycin, is covered by the government's permissive ruling, and is being made available in Canada to the fishing industry.

Spokesmen for the American Cyanamid Co. emphasize that Acronize is an additional safeguard and not a substitute for good refrigeration and sanitary practice. They say the process will be made available to fishermen and processors in Canada only under a franchise agreement which will require the strictest standards; and that the product will not be sold indiscriminately.

All details of the franchise and how the material will be made available to the industry had not been released at presstime of this issue.

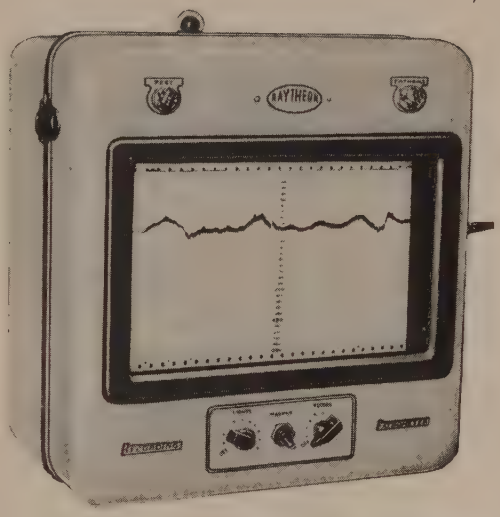
Questions regarding the importation into the United States of fish which has been protected by Eureomycin have been submitted to the U.S. Food and Drug Administration, whose officials have replied that importation of such fish would be in violation of the American law until and unless a tolerance is established by Food and Drug on fish which have been protected by antibiotics. Petition for such a tolerance has been filed with Food and Drug, but no action on it had been announced at presstime.

• Action by Canada in permitting the use of Acronize on fish is expected to stimulate study in the United States, and perhaps to accelerate acceptance of antibiotic protection for fish handled by the American industry, as well as imports.

Food and Drug is known to be studying extension of antibiotic protection to fish and developments may be anticipated, perhaps first in the case of fish destined only for canning.

WHICH IS THE BEST FATHOMETER* FOR YOUR VESSEL?

Raytheon DE-102 Indicator Depth Sounder
High sounding rate for detailed observations. Ranges 12-240 feet; 2-240 fathoms. Oversize 10" diameter dial for quick, accurate reading.



Raytheon DE-103 Recorder Depth Sounder
Plots a permanent record of soundings. Dual ranges: 12-300 feet and 300-600 feet; or 2-300 fathoms and 300-600 fathoms.

HERE'S WHAT USERS TELL US

Both of these Raytheon Depth Sounders offer unexcelled accuracy, dependability and economy. You'll find them earning their keep on all types of commercial vessels. Each model . . . DE-102 Indicator or DE-103 Recorder . . . offers unique benefits for different applications. Your choice will depend on your specific requirements. These concrete examples will help you decide which Fathometer will do the best job for you.

WORK BOATS
Skippers report that nothing beats the big dial, accuracy and high sounding rate of the DE-102 Indicator for normal workboat operation. Navigating in difficult passages and crowded harbors is easier and safer with a DE-102 on the bulkhead. For special jobs, of course, a Recorder is required . . . and that means the Raytheon DE-103.

FISHING VESSELS
Here both models are popular but, in general, the DE-103 Recorder is favored. Correct depth is recorded continuously on permanent graph paper freeing you for other jobs while underway. It not only finds depths accurately and locates fishing grounds, but also indicates location and size of fish schools. Often both the DE-102 Indicator and DE-103 Recorder are installed to give the dual benefits of both models.

FOR YOUR VESSEL

Regardless of the kind of vessel you operate, there is a genuine Fathometer Depth Sounder to meet your needs. See your Raytheon Dealer and he will show you how you can make this equipment pay for itself in a short time, or, for complete product specifications, write Dept. 6120.

*Look for the Fathometer® trademark identifying the *only* depth sounders backed by half a century of experience.

RAYTHEON MANUFACTURING COMPANY

COMMERCIAL EQUIPMENT DIVISION
Marine and Aviation Sales Department
Waltham 54, Massachusetts

RAYTHEON

A-1022

Excellence in Electronics

CALIFORNIA CANNED TUNA PACK — August, 1956

Can Size	Pack Solid	Standard	Chunk	Grated, Flakes	Dark & Light	Tonno	*Misc.	Totals, actual cases
			WHITEMEAT TUNA					
4-lb. 12s	1,108	...	...	...	...	...	...	1,108
1-lb.	1,917	...	266	...	...	...	...	2,183
½ lb.	192,972	1	58,411	38,303	627	25	...	290,339
½ lb.	...	...	...	...	...	...	152	152
¼ lb.	28,328	...	812	...	...	...	...	29,140
Totals, actual cases	224,325	1	59,849	38,303	627	25	152	322,922
			LIGHTMEAT TUNA					
4-lb. 12s	...	...	1,432	...	...	...	...	1,432
1-lb.	391	...	15,016	205	...	...	...	15,612
½ lb.	42,406	6,929	565,261	49,500	3,976	5,198	...	673,270
¼ lb.	8,865	...	20,446	...	...	**5,825	...	35,136
Totals, actual cases	51,662	6,929	661,644	49,705	3,976	11,023	...	725,450
			YELLOWTAIL					
½ lb.	...	28	...	956	...	...	...	984

Totals converted to standard cases of 4 doz. ½ lb. cans

Whitemeat	311,643
Lightmeat	741,512
Yellowtail	984
Combined	1,053,139

*Specialty packs converted to 48 halves on the basis of tuna content of the specialties.
**In cases of 100 cans.

Hike in Tariff on Fillets Favored by Unanimous Vote

● Unanimous recommendation of a tariff increase for imported groundfish fillets, including blocks for the manufacture of fish sticks, was announced the middle of October by the United States Tariff Commission as result of an investigation pursued since January of this year.

The recommendation went to President Eisenhower, who had until December 11 to reach a decision. No action had been taken at presstime, but those who anticipated acceptance of the recommendation believed it would come before the election.

Possible significance is seen by some interpreters in the fact that this is the first fully favorable recommendation which the Tariff Commission has made in recent years on a petition for tariff relief on fishery products. Actually this is the third time the commission has investigated fillets in response to an industry complaint. The last one resulted in a partially favorable recommendation which was not accepted by the President.

● Specific findings of the Tariff Commission, in which all members concurred, were:

1. "As result . . . of concessions granted in GATT . . . fillet products are being imported . . . in such increased quantities . . . as to cause serious injury to the domestic industry."

2. "In order to remedy such serious injury it is necessary that such products now dutiable at 1⅞c per pound be made dutiable at 2.8125c per pound, and that products now dutiable at 2.5c per pound be made dutiable at 3.75c per pound."

The commission made no recommendation with respect to changing the quota structure; nor did it distinguish between fillets imported for sale as such an fillets frozen in blocks for the production of fish sticks.

● In its findings, the Tariff Commission determined that *almost 90% of the fillet slabs or blocks used in U. S. production of fish sticks are imported.*

In 1955 imports of 128 million pounds of fillets entered the United States. Of this volume, 48 million pounds were in the form of slabs for fish sticks.

For the period 1939-48, domestic production accounted for 70% of the consumption of cod fillets in the United States, and virtually 100% of all other fillets.

By 1955, domestic operations accounted for only 15% of the cod fillets used in the country, about 75% of the ocean perch fillets, about 50% of all other fillets, and only 10% of the fillet blocks.

Recommendations of the Tariff Commission apply only to fillets of cod, haddock, hake, pollock, cusk and ocean perch. Of these species only cod and ocean perch are produced on the Pacific Coast, and it is not believed that Pacific ocean perch fillets are imported in any quantity.

Thus the increases proposed by the Tariff Commission would affect the Pacific Coast trade directly only with respect to a limited quantity of cod fillets.

● Canadian Reaction

Instant protest against the Tariff Commission recommendations rose in Canada, and can be expected to appear in official form if the President accepts the proposed increases.

Although any increase which might be granted would not affect the fisheries of Pacific Canada, the United Fishermen and Allied Workers Union in British Columbia at once proposed retaliatory measures by the Canadian government if the tariff increase is granted, one of them being enforcement of the 12-mile limit to curtail operations of U. S. fishermen off the British Columbia and Canadian maritime coast.

E. E. Willkie, PAF Head, Dies of Heart Attack

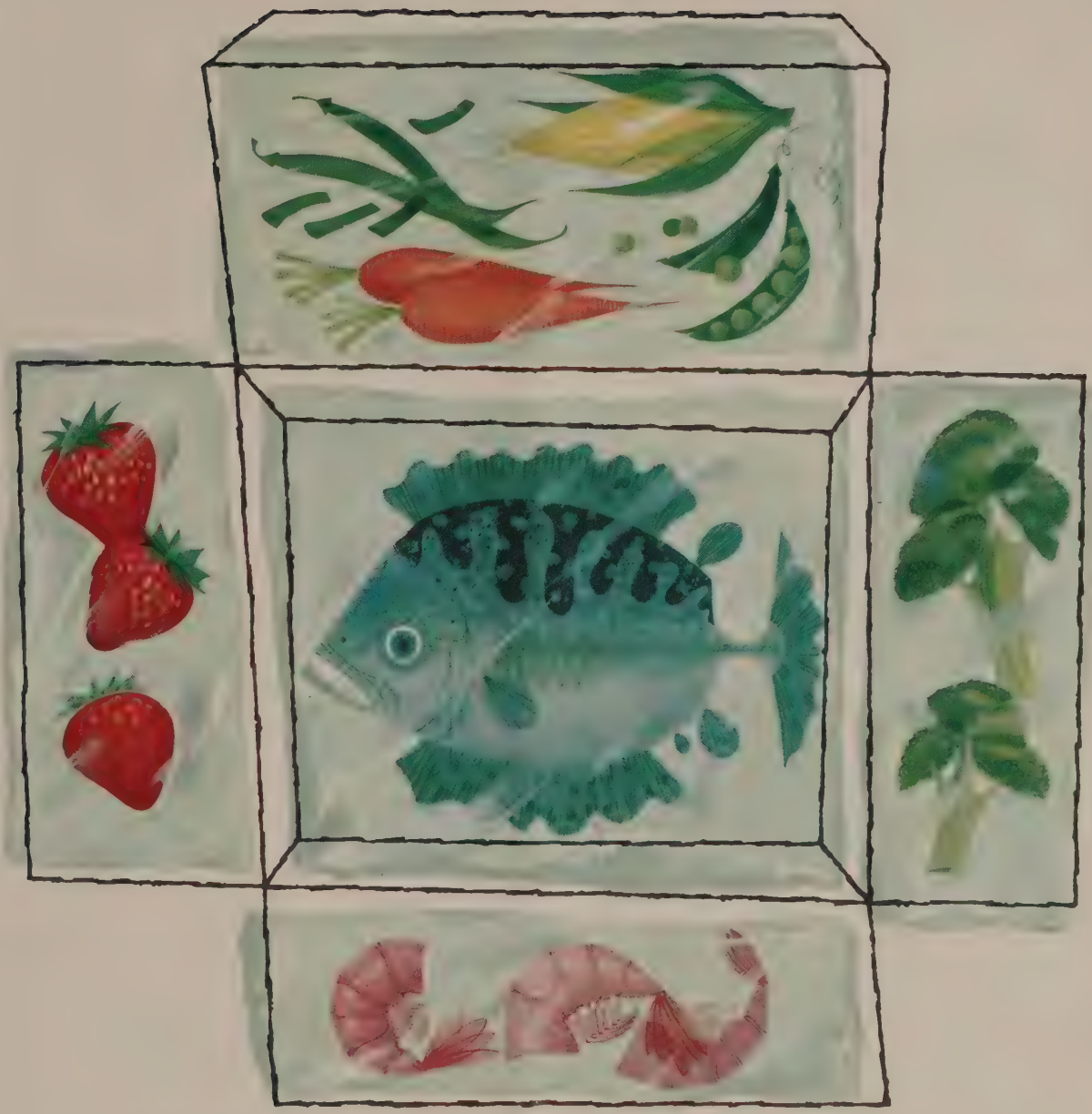
Edward E. Willkie, president of Pacific American Fisheries, Inc., largest concern in the American salmon canning business, died of a heart attack at his home in Bellingham, Wash., Oct. 15. Mr. Willkie, who was 60, had been away from his office with a minor ailment for a few days, but was not thought to be seriously ill.

S. G. Tarrant, executive vice president for operations, was elected president of the company, succeeding Mr. Willkie.

He became president of P.A.F. in 1952, resigning as a vice president of Libby, McNeill & Libby. Later he was president of the National Canners Association, which he had previously served as vice president. At one time also he had been president of the Evaporated Milk Association. His duties with Libby, McNeill & Libby included responsibility for its salmon and canned milk divisions, so he came to Pacific American with long experience in salmon canning administration.

At the time of his death he was a vice president and trustee of the Association of Pacific Fisheries. He was a brother of the late Wendell Willkie, 1940 Republican nominee for the presidency.

Mr. Willkie was a native of Indiana and a graduate of the United States Naval Academy, where he was an athlete of wide note, particularly as a member of the Navy football team. In 1920 he was a heavyweight wrestler on the American Olympic Games team at Antwerp.



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PACIFIC FISHERMAN'S NEWS

NOVEMBER 1956

Albacore Run Keeps up Late At $300 Price

● Albacore was still being delivered in substantial volume at several points along the coast as this issue went to press just before the end of October.

San Diego was getting the major part of the business, with Astoria apparently in second place.

San Pedro, San Francisco, Moss Landing and Eureka were sharing in the business.

● Prices stood at $300 through the month, following the sharp September slump, which saw prices skid all along the coast from $375 to $325 and finally to $300. At Moss Landing the traditional $50-under-the-market discount prevailed to offset the cost of truck hauling to Southern California.

The Albacore price curve for the year was an interesting and somewhat erratic thing. In Southern California the season opened with $350 paid. After a time, when production seemed laggy, buyers bid it up to $375.

Then the north coast fishing developed about the middle of August. For a time it was limited in volume and no one took alarm. Finally, under the impact of heavy landings, and with only two canneries really operating on the Columbia, the price cracked to $325. California buyers immediately revised their offers to match, and subsequently trimmed them to $300.

The Southern California fishermen accepted the figure "under protest."

In the Pacific Northwest at least the packers blamed deliveries of under-size fish, "tinkers" running down to 9 lbs., for the initial break in price. The fishermen denied that Albacore below the California legal minimum had been hauled north for sale in Oregon.

● Frozen Albacore imports from Japan to Southern California showed a marked decline for the first 10 months of the year, being far below the traffic of the year before. This more than offset the gain in the domestic Albacore catch, which is expected to be about 8,000 tons above 1955 figures.

Sardine Fishing Fair For First Dark of Season

● First dark of the Southern California sardine season produced 16,356 tons, of which 5,344 tons—virtually one-third — were delivered October 17, the last day of the dark.

Comparison with 1955 production is not possible, for in that year there was no fishing during the first dark of the Southern California season.

However, production from the Central California area to that date was 5,959 tons, compared with 6,909 tons in the same period of 1955.

Best fishing during the first dark of the season seemed to be well along the coast toward San Diego, with the boats finding best schools off LaJolla and Del Mar.

Schools generally were small and big catches rare, although some ran up to 230 tons, taken late in the dark by the *Sea Scout*.

Nine-Month Tuna Catch Brings-in $35.5 Millions

● More than $35,500,000 was paid by Southern California canners to San Pedro and San Diego fishermen for raw tuna during the first nine months of 1956.

Domestic tuna landings processed by these canners during this period totaled 132,101 tons, according to figures from the California Fish Canners Association.

"This tonnage is the highest since 1951, when 135,496 tons were delivered by the domestic fleet to the Terminal Island and San Diego canneries," Charles R. Carry, executive director of the Association explained. "Broken down, the clipper fleet landed 90,000 tons; purse seiners 27,000 tons and albacore boats, 14,000 tons."

Former Police Official Manages Fishermen's Group

Bill Farrar, former police commissioner of Tacoma, and later skipper of the troller *Showboat*, is now president and general manager of the Federated Fisherman's Association, Inc. with headquarters at Terminal Island.

The membership of the federation is divided into local units on the coast whose individual members are the salmon and Albacore fishermen, who have felt the need of a strong voice ashore to represent them as problems in the fishing industry arise, as they are of necessity a scattered group often at sea for long periods of time.

SIU Charters Cannery Local at Anacortes

Chartering of the Anacortes cannery workers union as an affiliate of the Seafarers International Union was announced in October by Ted Nakkerud, SIU representative. The union has membership running up to 400, and formerly was chartered federally by the AFL.

"Brisk's" 722 Albacore High Catch for One Day

Best Albacore fishing of the season on the North Coast appears to have been the 722 fish taken by the halibut vessel *Brisk*, trolling jigs about 110 miles south of the Columbia River.

Anyone know of a better one-day catch than this high-liner?

Standard Oil Consolidates Moss Landing Stations

Standard Oil Co. has consolidated the marine fuel facilities at Moss Landing in one location by the marine store fuel dock, making it the only station here. Arthur Bloom, who operated the station independently, leased the plant to Standard on a long term basis.

WHY TIME-TESTED TRIPLE C BEATS THE HIGH COST OF HAUL-OUTS

Fishermen say Triple C is good for boat bottoms, but they really mean it's bad for grass, teredos, and all other marine growth. With Triple C . . . Cape Cod Copper Compound . . . keeping bottoms clean, slick and drag-free, owners expect their boats to go faster, burn less fuel, and need fewer costly haul-outs.

Actually, most people who know and use the sea, know and use Triple C. Its only secret is the formula, time-tested to guarantee anti-fouling action for months longer than ordinary bottom paints.

Find out about Triple C for yourself —use for a at your dealer or boat yard

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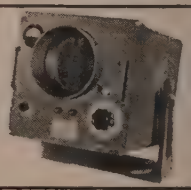
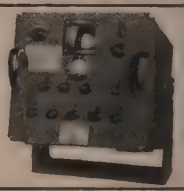
Superior MARINE ELECTRONIC EQUIPMENT by Edo

FISHSCOPE Most advanced fish finding device on the market, available in three versions for deep and shallow fishing. Spots fish on CRT at depths to 400 fathoms, then magnifies any 10-fathom sector 20 to 40 times for clearer view. Compact design, single transducer.



LORAN Compact, direct-reading aid to long-range navigation. No special training required to operate. Fix obtained from single, 28-tube unit in matter of seconds, regardless of weather or sea conditions. Absolutely accurate though relatively low in cost.



RADAR For long and short-range navigation in any weather. CRT display gives clear picture on 1, 2, 5, 10 and 20-mile range. Patented slotted waveguide antenna, mounted on transmitter, assures superior definition. Ideal where space and generator capacity are limited.

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Pacific Fisherman's NEWS

November 1956 Volume 54 Number 12

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534 S. W. Third Ave., Portland, Ore.
CApitol 3-6348

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MAin 1626

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Fishermen's Union Favors Limit on Gear and Fishing

● Limitations on number of units of salmon gear; a Pink salmon treaty between the United States and Canada: and protection of off-shore salmon resources to the extent of prohibition of ocean fishing if necessary —

These are the three points in recommendations made to the membership of Local 3, I.L.W.U., the purse seine fishermen of Puget Sound and Alaska, by its executive board.

The declaration of this program opens with these words: "There is a crisis on Puget Sound and it can no longer be pushed to the background. . . . The terrific influx of gear is such that . . . fishermen, tendermen and cannery workers are being hurt where it is felt most — in their take-home pay."

Specific recommendations are:

1. "Limit the units of gear operating in Puget Sound, regardless of type, so that a minimum of five fishing days a week may be effectuated;"

2. "Urge . . . every reasonable means to expedite signing of a Pink salmon treaty as a step to preserve this great natural resource so beneficial to the people of the United States and Canada."

3. "Seek an effective agreement with Oregon, California, Alaska and Canada which will give our off-shore salmon resources the kind of protection needed; and, if necessary, we approve the closure of all off-shore salmon fishing when . . . necessary . . . for proper fishery management."

Boat Broker Switches To Albacore Fishing

Donald L. Woodward, Jr., slipped away from his boat broker's shop at the Oakland Estuary Marine early this fall and went to sea again for one Albacore trip, running up the ocast to the Columbia River, where they delivered 17 tons. Not bad.

Mr. Woodward, who manages the Oakland Branch of his father's Moss Landing business, is located at 901 Nineteenth Ave., Oakland. During the fishing season fish boat sales slack-off and he likes to go to sea for a trip or two to keep his hand-in and his understanding sharp as to what fishermen really want and need in a boat.

Fish with—

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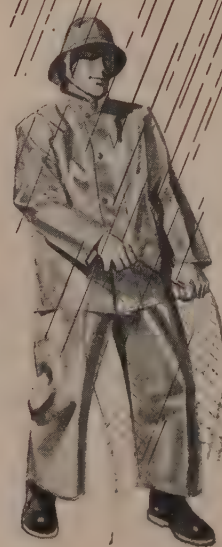

Specify

TOWER

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In the foulest weather, on hot days or cold, fishermen can be sure of complete protection if they're wearing famous TOWER Neoprene Suits and Sou'westers, or hooded shirts with roomy pants. These comfortable durable, *extra-protective* garments . . . made of strong, impregnated fabric coated inside and out with Neoprene Latex . . . are highly resistant to abrasions, acids, alkalies, salt water or any hazards that can threaten the important work of today's commercial fisherman.

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Standard Engineer's Field Report

CASE HISTORY
Chevron Pressure
PRODUCT Primer System
Allman-Hubble Tugboat Co.,
FIRM Hoquiam, Washington

Priming System starts diesel on 1st or 2nd turn — saves batteries and eliminates fire hazard

COLD WEATHER STARTING is no problem aboard the Ranger, (above), 43-foot work boat operated by Allman-Hubble Tugboat Company in the Aberdeen-Hoquiam area. A small steel cartridge, charged with Chevron Priming Fuel, fires her 150 h.p. Caterpillar D-17000 power plant on the first or second turn—avoiding the usual long cranking period that exhausts batteries. Mr. Howard Hubble, skipper of the Ranger, is shown (right) inserting primer cartridge in Chevron Pressure Primer Discharger mounted on engine. "This system," Captain Hubble says, "not only saves batteries, it gets away from the dangerous practice of holding a rag soaked in starting fluid up to the breather cap. You get a safe, controlled charge, with no danger of fire or a cracked cylinder head caused by a racing engine." The Chevron Pressure Primer System is Coast Guard approved. It starts diesels in less than 10 seconds at -50°F.

FREE FOLDER tells you more about Chevron Pressure Primer System and how to install it on different engines. Write or ask for it today.

FOR MORE INFORMATION about this or other petroleum products of any kind, or the name of your nearest distributor, write or call your Standard Oil Company of California, 225 Bush St., San Francisco.

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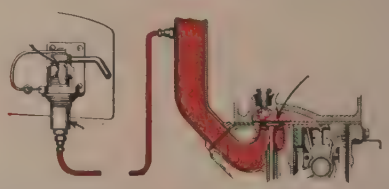
Why Chevron Pressure Primer System helps starting

Volatile Chevron Priming Fuel atomizes in induction system at temperatures as low as -65°F. Pressure or weakest spark from engine fires mixture.



Simple, rugged discharger prevents priming fuel leakage. Small, safe steel cartridges protect priming fuel from water and dirt.

STANDARD OIL COMPANY OF CALIFORNIA

Seattle National Boat Show

November 23—December 2

Check List for Fishermen

• What with the bright prospects for Alaska next salmon season:

What with the Pink year on Puget Sound, *PLUS* the Quesnel and Adams cycles on the Fraser;

What with the mounting interest in seawater, chilling of fish aboard the fishing vessel and aboard the tender;

There's more interest than ever in engines, pumps, refrigeration systems, power take-offs, reduction gears, instruments, materials and gear.

• Where to see it? And when?

Well, a lot of fishermen and fishery plant superintendents have found that one of the best places is the Seattle National Boat Show, which runs from November 23 through December 2 at the New Armory.

That fall fixture has become a *must* for the fishermen and operators who have an eye for the future and a feel for tomorrow's technology.

Knowing this, Pacific Fisherman has scanned the list of exhibitors, with an aim to determining for its readers the firms and individuals who will have something of special interest for the commercial fishermen and operators.

Robert E. Walters of the *Miller Freeman Publications* staff, editor of *Pacific Work Boat* and co-editor of *SEA*, is the general chairman of the show this year. He announces that Dealer Day, November 28, will see a remarkable gathering of representatives and manufacturers from all over the country. For example, directors of the National Association of Boat and Engine Manufacturers will hold their annual meeting during the show.

Check List

So *Pacific Fisherman's* check-list of exhibits the commercial fishermen and operators will want to see follows:

Washington Stove Works, boat and cannery galley ranges.

Western Gear Corporation, those brilliant Seamaster gears.

Wright Outboard Marine Co., Johnson outboard motors and Michigan wheels.

White Diesel Engine Division, White Motor Co., Chrysler engines, Atlas, Superior and White diesels.

C. A. Woolsey Paint & Color Co., the newest things in anti-fouling paints, plus the old-line, old-time copper bottom paints.

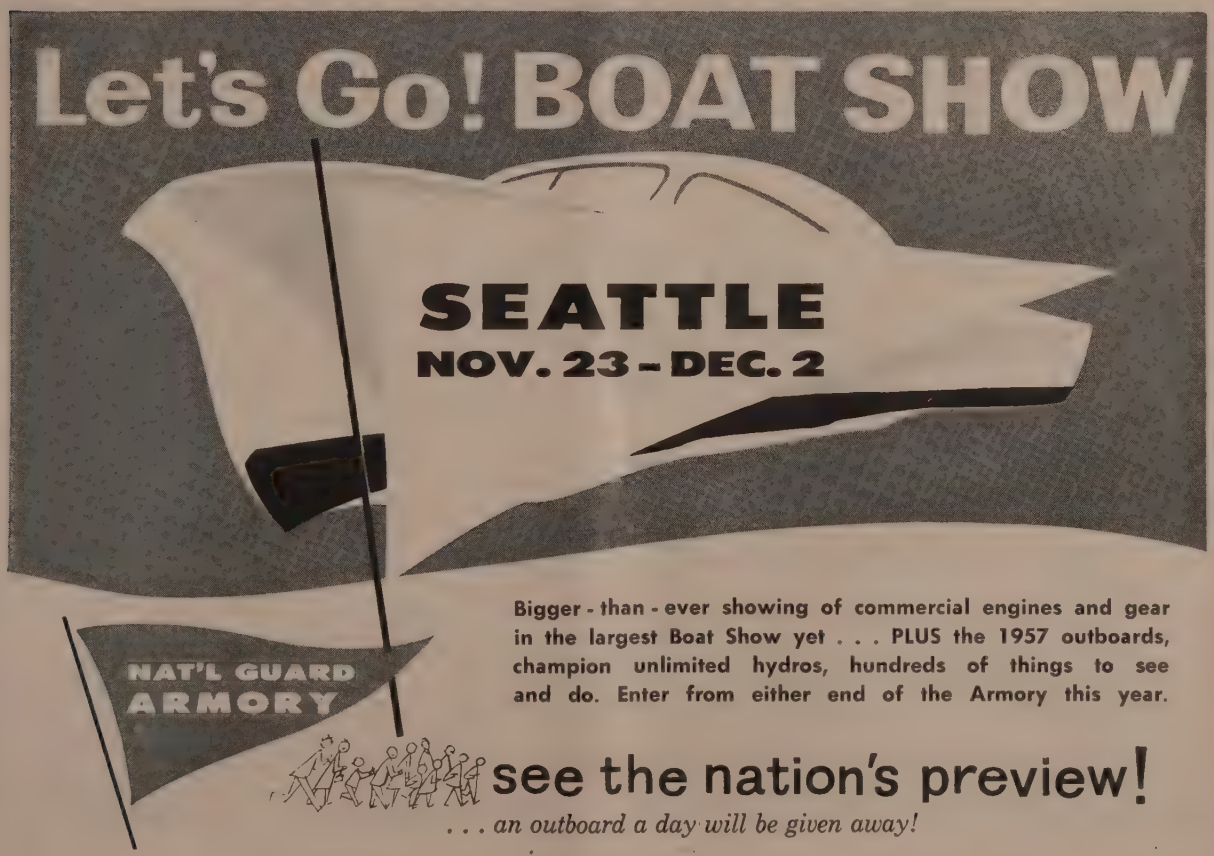
Sunde & d'Evers Co., outboards, paints, cordage, marine hardware.

Seattle Marine & Fishing Supply Co., Fageol inboard and outboard engines, fishing gear, fishermen's equipment and cannery supplies.

Ross Laboratories, electronic instruments with special applications in fishing and navigation.

Raytheon Manufacturing Co., Fathometer and Raytheon Radar, electronics proved in the world's fishing.

Pacific Marine Supply Co., Plymouth rope, Linen Thread nets and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. . . an outboard a day will be given away!

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Ontario Provincial Police Boat, **William H**, 31-foot cruiser, patrols Lake Simcoe and is based at Barrie, Ontario.

. . . say Ontario Provincial Police

The Ontario Provincial Police maintain peace in the Canadian Province of Ontario. Their beat: over 412,000 square miles, or about one-eighth the area of the United States. This includes 49,300 square miles of navigable waters.

To patrol all inland waters in Ontario, the Department maintains a fleet of boats, 22 to 35 feet long. Besides general police work, all boats must be on the alert for any emergency—twenty-four hours a day. For example, when Hurricane Hazel flooded Toronto in 1955, every available unit remained in emergency service for days without time out.

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Marine Beat. Corporal Cecil Everard, at microphone, hails boatman while other constables keep a sharp lookout. Ontario Provincial Police Boats use Chrysler Crowns, Royal Specials and Imperial Marine Engines.

The **William C**, a 35-footer, covers Lake Nipissing from North Bay, Ontario. Both the **William C** and **William H** were built by Hunter Boat Works, Ltd., Orillia, Ontario. Other Chrysler-powered boats, Temagami and Kenora, patrol Lake Temagami and Lake of the Woods. These boats are 22-footers, were built by Shepherd Boats, Ltd., Niagara-on-the-Lake, Ontario.

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Bryant's Marina, specialized boats developed by Bryant's for gillnet service and other commercial fishing. Christ-Craft motors, Bendix electronic instruments and Evinrude outboards.

Jack Boyce, manufacturers' representative, B. J. marine bearings and Jabsco pumps.

Alaska Pacific Supply Co., Murphy diesels and Red Wing gas and diesel engines in the sizes, speeds and types favored by fishermen.

Albina Engine & Machine Works, the handy Albina power take-offs that drive so many auxiliary and deck gear units for fishing craft.

Auto Engine Works, Capitol marine reduction and reverse gears.

Apex Marine & Equipment Co., P & H diesel engines and Graymarine gas engines.

Vancouver Fish Haven

B.C. Bridge & Dredging Co. will carry out the preliminary work in connection with Vancouver's (B. C.) new $1,000,000 fishermen's wharf on False Creek. About 225,000 cubic feet of material will have to be removed from the area to be dredged. Wharf, floats and other surface construction will be undertaken by Fraser River Pile Driving Co.

Nine Clippers Fish for Plant In Puerto Rico

• A fleet of nine tuna bait boats is fishing for the Ponce, Puerto Rico, cannery recently acquired by the Van Camp Sea Food Company from the South Pacific Canning Company of Long Beach, which built and operated the plant as the National Packing Company.

Glenn Copeland, director of purchasing for Van Camp Sea Food Company, in mid-October returned from a trip to Puerto Rico. He reports that the *Royal Pacific*, formerly fishing for South Pacific Canning Company, is part of the fleet; also *Sea Magic*, skippered now by Manuel Robero; *Intrepid; Katie Lou*, Ray Erickson; *Far Famed*, Joe Nunes; *White Star*, John Tasso; *American Beauty*, Vernon Bowman; *Chicken of the Sea*, Walker Morgan; and *Western Ace*, Earl Peterson. The last is one of the largest American tuna boats.

The cannery was constructed in 1953, when *Pacific Fisherman*, reporting on its construction, said it represented an investment of $600,000.

Continental Can Company equipment was installed. The plant, designed to expand to handle 100 tons a day, is located at the main City Dock which has separate unloading facilities for tuna clippers and ocean freighters.

Mr. Copeland says the vessels delivering tuna to the Ponce cannery are fishing in the customary areas on the high seas of the West Coast. Any tuna fishery which might be developed in the Caribbean could also supply this new Van Camp operation. Boats delivering fish from the West Coast grounds have about a 900-mile run from the Canal Zone to Ponce.

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SCOPE and SOUNDER

Monthly digest of present-day pioneering methods and equipment in world fisheries.

By PETRALE

Cod Found Swimming High Over Most of Life Cycle

● A recent report on the Arctic-Norwegian cod contains some interesting findings regarding the cod and hadock, that such species, which are generally considered typical ground fish, spend most of their life at higher levels. Scores of echographs show conclusively that these species occur pelagically in big schools and, contrary to common belief, move mostly in the upper levels and not along the bottom. The author of the report, Gunnar Saetersdal, believes that these fish occur along the bottom in relatively short periods. In view of this discovery he emphasizes the urgent need of developing new methods of fishing these waters and the Ocean Research Institute will dispatch an expedition this fall to test the value of float lines and mid-water trawls.

A good portion of the report deals with the fluctuation in stocks of Arctic-Norwegian cod. The investigation has resulted in establishing connection between the Lofoten landings and the numbers of young cod caught in the subsequent Finnmark fisheries three years later. On the basis of this relationship tentative forecasts are made for two years in advance of the Lofoten fisheries.

An important chapter of the report concerns the effect of the intense international trawling on the stock of young cod in the Barents Sea. An estimated 700,000 metric tons of gutted Arctic-Norwegian cod was landed by four leading fisheries nations (Soviet Union, Great Britain, Norway and Germany) in 1955, an increase of about 100,000 tons over 1954. The Norwegian fishery consultant points out that in recent years the Lofoten fisheries have yielded poorer catches than indicated data on the stock of young as related to the former relationship between young and mature cod.

The observations on the plagic state of these species is rather interesting and adds further weight to the justification of experimental mid-water trawling. Speculation as to the pelagic habits of Pacific true cod and other West Coast species referred to as bottom fish was commented on in the October, 1955, Pacific Fisherman, "The Open Ocean". Since that time, the *John N. Cobb* has carried out a preliminary mid-water trawl survey and it is anticipated that future work will be done in this field.

Blackcod Makes Long Swim

● A blackcod tagged at Holmes Harbor (1955) on the Westside of Whidby Island in Puget Sound was recovered in August off of Middleton Island in the Gulf of Alaska. The tagged fish, which was recovered about 15 months after released, moved out of Puget Sound and up the Coast some 1,100 miles. The fish was recovered by the Canadian vessel *B. O. Clipper* during long-line operations for halibut and was being butchered for bait when the tag was noted. The tag was recovered by a member of the International Pacific Halibut Commission stationed at Vancouver, B. C., during unloading.

"Cobb" Trawl Exploration

● *John N. Cobb*, currently on an exploratory trawl cruise off the coast of Southeastern Alaska, reports that drags made off Prince of Wales Island produced a showing of petrale rock and Dover sole. Several tows made in 130 fathoms produced catches of mixed Pacific Ocean perch and Dover sole with up to 850 lbs. of perch per drag. Weather conditions in the area are reported adverse and considerable time has been lost because of intense fall storms.

Jack Mackerel in Northwest

● Commercial fishermen fishing off the vicinity of Cape Flattery reported large catches of Jack mackerel during the past season. The occurrence of this species in these more Northern waters is not rare and it has been noted as far north as the Gulf of Alaska. Jack mackerel is a streamlined rapid swimming fish which is landed in large quantities by Southern California fishermen. A total of 146,000,000 pounds were reported to have been landed in California in 1952. The heavy landings of Jack mackerel in Washington coincided with the first large run of Albacore in Oregon since 1950. Both species generally occur in the Northwest during the warm summer months. Because of its erratic appearance off Washington and Oregon there has been no utilization of mackerel in the Northwest.

Shrimp Fishery Likely

● The success of the past spring shrimp cruise made by the *John N. Cobb* has evidently stirred interest in the Grays Harbor area, and there is a strong likelyhood a shrimp fishery will soon start in that region. Two vessels are tentatively scheduled to start fishing in the near future and there is a report that one of the local Grays Harbor fish companies will be in possession of the first automatic shrimp peeling machine to show up on the West Coast. Excellent catches of the small "pink" cocktail shrimp were taken by the *Cobb* off the Washington Coast during this past Spring.

Atomic Fishing

● A scientist from the University of Wisconsin, Dr. Hasler, recently told of the possibilities of an atomic fishing vessel. Hasler said that atomic energy might be used to lure, capture sterilize and refrigerate or can fish. This dream would be accomplished by the vessels atomic reactor which would not only propell the ship, but would furnish sufficient energy to electrify the surrounding water. This would attract the fish to a point where they would be pumped aboard. Hasler said these ships would be valuable for nations whose ships go long distances into the tropical seas to catch fish. Speaking to the Senate-House subcommittee of the Atomic Energy Committee said: "I visualize the possibility of building an atomic ship with an abundant supply of energy available for the canning and refrigeration processes that could be taking place on the ship as soon as the smaller fleet ships which supply such a mother ship land their catch."

S. E. Alaska King Salmon Fishery

● The Alaska Department of Fisheries has published a report on the King salmon troll fishery of Southeast Alaska. Two biologists, Robert Parker and Walt Kirkness, are authors of the report, which relates a short history of the fishery and gives results of recent studies. The King salmon troll fishery in Southeastern Alaska began in the early 1900's and with rapid gear improvements and exploration of new

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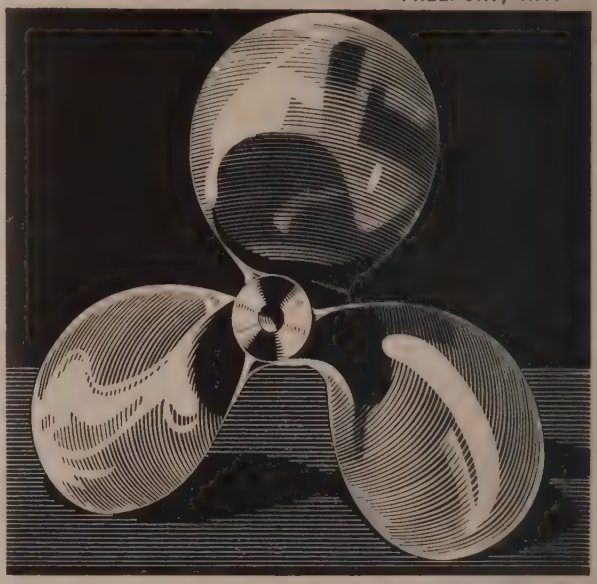

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ARNE STROM, *Owner*

Ted Jacobsen, field sales manager, Radiomarine Sales, Radio Corporation of America, New York City, was on the Pacific Coast recently to confer with company personnel and call on the trade at Seattle, San Francisco and Los Angeles. Here he is with Earl W. Baker (right), Radiomarine's Seattle manager.

grounds a peak of 17 million pounds of dressed fish was landed in 1937. Production has declined steadily since that year to a current level near 9 million pounds. Results of tagging in 1950-52 illustrated the importance of the Columbia River to the Alaska fishery. The second most important contributor was said to be the Fraser. All the major river systems north of California were shown to make some contribution to the fishery. The rivers of Alaska did not figure as important contributors to this fishery.

SAN PEDRO SEINE SETS

● JERRY L. HYDE, of Compton recently documented a fishing vessel, named *Pam-a-Lee,* built in Compton and with a 450-hp diesel engine . . . the boat is reported to be built in Compton in 1956. . . Other boats, documented for fishing and indicated as new by the merchant vessels of the United States in 1956, include the *Spartan,* owned by Albert Urse of San Diego; the *Wildcat,* built by Randall Boat Works and documented by George P. Myers; and the *Norma J.,* built in Southern California for Herbert Juenke. . .

THE SECOND diesel-powered skiff from the yard of the Mardesich Boat Works of San Pedro has been delivered to the purse seiner, *Marsha Ann,* . . the skiff is 24-feet long and utilizes the same type of General Motors engine, Model 4-51, that powered the skiff of the *Anthony M,* 85 hp. . . Joe Vilicich is skipper of the *Marsha Ann.* . .

Former fishing boat *Geronimo,* now working for Marineland, near Los Angeles, has taken what is considered to be the largest blue shark ever taken alive. . . Frank Bracato is skipper of the vessel which hunts for fish life for the big marine display. . . Mr. and Mrs. John Rados are planning to build at Kings View Estates in San Pedro . . . he is president of Harbor Boat Building Company. . . John DiMassa, Anthony Cigliano and Eugene Estep prepared a swordfish barbecue for the San Pedro Elks recently. . . Gerald Zar, son of the manager of Berth 73's division of Marine Hardware Company, has been elected president of the San Pedro Imperials. a social and sports group, sponsored by Anderson Memorial Playground. . . Carlos Coello, who formerly skippered the *Yellowfin,* a seiner operated from Mancora, Peru, has joined the staff of Star Kist laboratory, Terminal Island. . .

AL CROSSON, Van Camp Sea Food Company, has stated that from the Pirate Ship at Disneyland more than two and a half million people have come aboard the boat which serves Chicken of the Sea products, etc. . . *Marauder* recently completed a fast tuna trip. . . Ed Morris of the Tuna Research Foundation not so long ago gave a talk before the Soroptimists on the history of the fishing industry.

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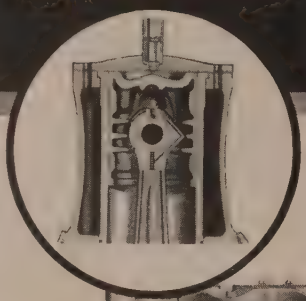
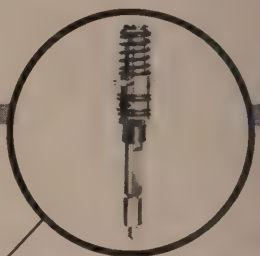
Look inside a Murphy Diesel for the reasons why Murphy engines are noted for economy, dependability and long life. You'll find design features ordinarily found only in large diesel engines . . . the "true diesel" features offered by no other engine in Murphy's size and power range.

Look for these features in your next diesel engine. Ask your Murphy Diesel Dealer to explain the advantages of "true diesel" operation for your power requirements.



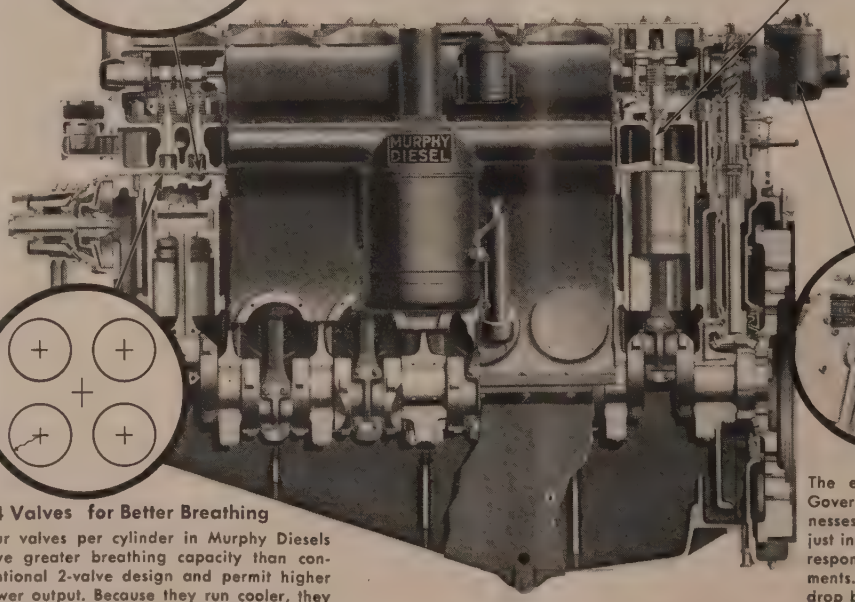
Plain, Open Combustion Chamber

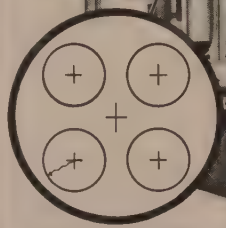
The Murphy Diesel's plain, open combustion chamber, like that of time-tested larger engines, assures *complete* combustion. Murphy owners get maximum power from each drop of fuel with less engine wear.



Precisely Controlled Fuel Injection

In the Murphy Diesel, fuel injection for each cylinder is accurately controlled by a simple injector unit which serves as both pump and nozzle. High pressure fuel lines are eliminated. There is no erratic, irregular injection, no after-dribbling or air binding.





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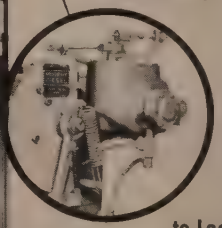

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Salmon Producers' Price Agreements Held Illegal

● Re-affirming once more the principle that operators of fishing vessels are "businessmen", the Federal Trade Commission late in October told Local 3, International Fishermen and Allied Workers Division, ILWU, and the Purse Seine Vessel Owners Association that the agreements under which they and the Puget Sound salmon canners have been operating are illegal.

In doing so the FTC rejected the arguments of the union and the association, which had contested the complaint brought against the industry almost a year ago. The 13 salmon canners named in the original complaint last spring accepted a consent decree with provisions similar to those of the current order.

Specifically, the order prohibits the union and association from (1) negotiating fish prices for its members; and from (2) interfering with the operation of any fishing vessel for the purpose of enforcing a price agreement.

The order does not:

1. Prevent any individual boat owner from acting individually in negotiating a price for the salmon caught by his vessel;

2. Interfere with collective bargaining between the union and employers on wages, hours and working conditions;

3. An association of fishermen from acting in accordance with the Fisheries Cooperating Marketing Act.

Producers' contest against the FTC complaint was based on the argument that the boat owners are in effect agents of the canners, and that therefore their boat crews are employes of the canners. This thesis the FTC flatly rejected.

Congressional action designed to permit fishery unions and associations greater latitude in negotiating with respect to the price of fish will be sought as result of the F.T.C. ruling, it was indicated by a statement from four interested groups.

Summing up the position thus: "Congressional action is needed and we believe that proper hearings and investigations into this matter will warrant corrective legislation", the statement was signed by George Johansen, secretary of the Alaska Fishermen's Union; Joseph F. Jurich, secretary-treasurer, Local 3, International Fishermen & Allied Workers Division, ILWU; Bert Johnston, manager, Fishermen's Cooperative Association; Nick Kulgis, secretary, Fishermen's Marketing Association.

Canners which accepted the consent decree against price negotiation and enforcement agreements are: Alaska Packers Association, American Packing Co., Burk Canning Co., Inc., Columbia River Packers Association, Inc., Dressel-Collins Fish Co., Farwest Fishermen, Inc., Fishermen's Packing Corp., Friday Harbor Canning Co., New England Fish Co., Pacific-American Fisheries, Inc., Sebastian-Stuart Fish Co., Washington Fish and Oyster Co., Inc., and Whiz Fish Products Co.

Ward Turnbull Rises With Nordby Supply

Ward Turnbull, vice president and manager of the Nordby Supply Co's. marine supply store at the Fishermen's Dock, Seattle, has taken on added responsibilities which will divide his time between Nordby's downtown headquarters and the Salmon Bay store. His appointment as treasurer was announced recently by J. Lynn Miller, president.

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SAN DIEGO

• *ELENA* caught fire in September at a San Diego boatyard, with extensive damage. Her manager is W. H. Babcock of San Diego. . . Joseph Corona, retired fisherman of San Diego, died in mid-September. He is survived by four sons, two brothers, a sister, and his widow. He had lived in San Diego since 1914. . . Albacore fisherman, *Aggie Lou*, went aground recently on a sand bar off Imperial Beach, San Diego. . . Bertram Stowell, owner, was aboard, and a crewman when the Coast Guard took the vessel to Shelter Island. . . Fisherman Antonio X. Telles died recently at his home in Palm City.

ELSINORE, new tuna clipper from the yard of National Steel & Shipbuilding, recently participated in a Yellowfin and Skipjack tuna tagging program with biologists aboard from the California Department of Fish and Game. . . Fishing was carried on in the vicinities of Alijos Rock and the Revilla Gigedo Islands off Baja California . . . during the cruise 26 Yellowfin and 767 Skipjack were tagged. . . *Deolinda*, tuna clipper, has been conveyed by Manuel Silva to San Diego Marine Construction Company . . . the 100-foot boat was built in 1935 and was named originally *Vantuna*, designed by San Diego Marine. . . Vincent Gann has transferred his ownership in the *South Seas* to Steve Stagnaro of San Diego . . . and Drake and Bullen of San Diego are reported the owners of the *Vivian A*, formerly operated by Salvatore Arancio. . . A little late to be reporting, perhaps, but tuna clippers *Heroic*, *Southern Pacific* and *Lucky Star* have, as has the *Elsinore*, carried biologists from California Fish and Game who carried on tagging programs on Yellowfin and Skipjack off the West coast of Mexico. . . Kettenburg Boat Works recently shipped two 16-foot tuna tenders, Chrysler Crown V-drives and Michigan wheels, to a Madrid, Spain, boatyard which is reported building two steel tuna bait boats.

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Myrth Sarvela Elected Mayor of Sitka

Mrs. Myrth Sarvela, secretary of the Northern Fishing Vessel Owners Association, and correspondent of *Pacific Fisherman's News* at Sitka, recently was elected mayor of that oldest of Alaska cities, ousting the incumbent mayor by a margin of three votes.

Mayor Sarvela is one of the best known and most vocal advocates of the Alaska fishing fleet, and is particularly active in support of the Alaska trollers' argument against the use of the herring resources of Southeast Alaska for reduction. She frequently appears at Alaska fishery regulation hearings to press this case, and has carried the contention effectively to Washington, D. C.

Myrth Sarvela, new mayor of Sitka, Alaska.

Trollers Swap Boats

Orville Helme has traded his heavy troller *Yolanda* to Les Williams for the latter's boat *L. and Eve.* Helme will fish for cod out of Santa Cruz and Williams will fish lobster out of Santa Barbara.

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Of Pacific Fisherman, published monthly except in January when publication is semi-monthly at Portland, Oregon, for October 1, 1956.

1. The names and addresses of the publisher, editor, managing editor, and business managers are:
   Publisher: Wm. B. Freeman, 121 Second Street, San Francisco 5, California.
   Editor: DeWitt Gilbert, 71 Columbia Street, Seattle 4, Washington.
   Managing editor: None.
   Business manager: C. L. Hillyard, 71 Columbia Street, Seattle 4, Washington.
2. The owners are: Miller Freeman Publications, Incorporated, 121 Second Street, San Francisco 5, California; Wm. B. Freeman, Miller Freeman, Jr., 121 Second Street, San Francisco 5, California; L. K. Smith, W. E. Crosby, 71 Columbia Street, Seattle 4, Washington.
3. The known bondholders, mortgagees, and other security holders owning or holding 1 percent or more of total amount of bonds, mortgages, or other securities are: (None).
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Wm. B. Freeman, President (publisher)

Sworn to and subscribed before me this 1st day of October, 1956.

Barbara M. Hampson, Notary of the Public San Francisco, California

(My commission expires February 18 1958)

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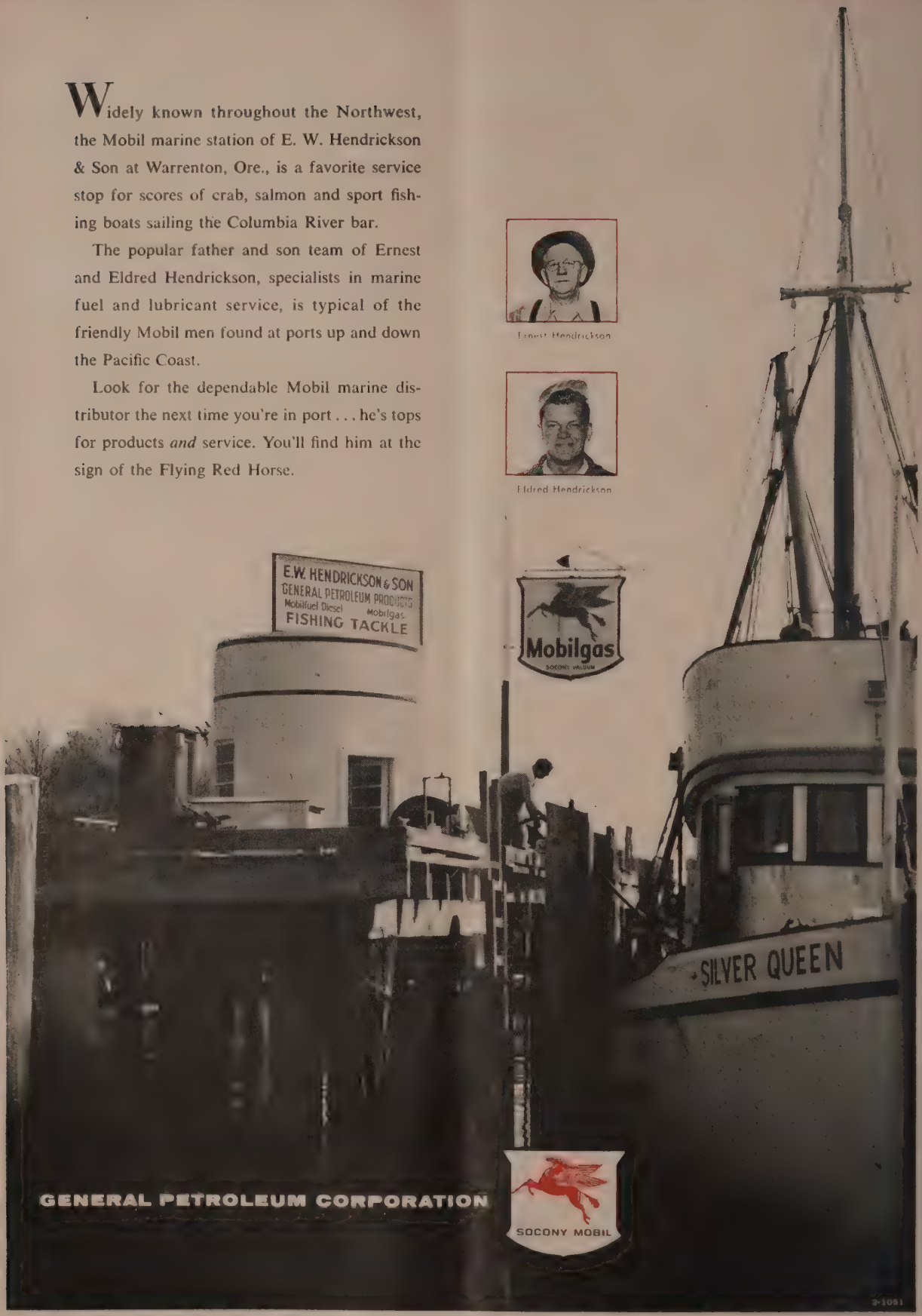

Hydraulic Dredge launched at Eureka for the Coast Oyster Co. The steel barge is 70′ in length, with a well in the hull through which the dredging ladder, shown elevated, is lowered to the bottom. Water jets, working inside the hood seen on the ladder behind and to the right of the man in the light shirt, lift the oysters and deposit them on a belt running inside the ladder. From this they go to a transverse belt which delivers them to the two-step elevating conveyor shown, from which they slide to oyster tender or transport barge.

Hydraulic Oyster Dredge Lifts Big Humboldt Crop

● With its sights set on production of around 600,000 gals. of oysters from its Humboldt Bay beds this season—the first for full-scale yield from this Northern California planting—Coast Oyster Co. launched a big hydraulic dredge October 5.

Coincidentally, it put its new opening house, fresh and frozen oyster packing plant, and cannery on-stream. The opening house is reputed to be the largest on the Pacific Coast.

The dredge, which is of design patented by R. H. Bailey of Seattle, is named *Ralph Hayes*, for the original investor in Pacific oyster planting on Humboldt Bay. He is a brother of Vern Hayes, president of Coast Oyster Co. Manager of the company's operations in California is F. M. Douglas. Ralph Hayes is in charge of Coast's operations at Poulsbo, Wash.

Within the past year two of the largest fishery companies in the world —Van Camp Sea Food Co. and British Columbia Packers, Ltd., took a large ownership position in Coast Oyster Co. The Van Camp company markets Coast's production of canned oysters and oyster stew, while British Columbia Packers through its American subsidiaries distributes Coast's fresh and frozen oysters.

● *Ralph Hayes* is the second dredge of its type in operation on the Pacific Coast, according to Mr. Bailey, its inventor. The unit is powered with a 100-hp. Caterpillar diesel providing power for propulsion as well as the pumps. The barge is 70 by 24 feet, with a 48′ ladder as the harvesting unit. Lowered to the oyster bottom, the ladder carries a 36″ Cyclone belt with 1″ holes, as well as the pipes through which two 21″ pumps deliver 20,000 gpm. of water through jets operating inside a steel hood 7′ wide. These jets sweep the oysters from the beds up inside the hood and deposit them on the belt. Stones, bits of shell, mud and small oysters pass through the holes on the belt, with only large oysters and shells delivered to the dredge itself.

Launching of the *Ralph Hayes*, which was christened by the man for whom it is named, took place at the Eureka Boiler Works, by which it was built under the direction of Mr. Bailey. Dr. C. R. Elsey, vice president of British Columbia Packers in charge of research and development, and a former president of the Pacific Oyster Growers Association, attended the commissioning.

The Cyclone wire belt on the dredge ladder is woven of No. 6 wire, nearly ¼″ in diameter, and woven to give effective 1″ openings to pass small oysters and bits of shell. Overall length of the belt is 90′, its weight 700 lbs.

The dredge can work to a depth below water surface of 15 to 18′, de-

Two Hayes and one Bailey—R. H. Bailey of the Pioneer Oyster Co., inventor and patentee of the hydraulic oyster dredge, smiles between two Hayes brothers. On the left, Ralph, for whom the dredge was named; and on the right, Vern, president of Coast Oyster Co.

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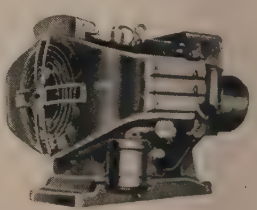

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pending upon the character of the oysters, as some kinds would tend to roll on the belt at the extreme depth.

The dredge is pushed by a tender in a circular path around a 600-lb. anchor to which is shackled a 7/16" wire cable wound on a drum aboard the dredge.

As the dredge completed each circle about the anchor about 6' of wire is released from the drum, which increases the radius of the circle dredged by this amount.

Adding thus to the radius at its turn of the circle, the dredge works an area of from 10 to 15 acres without missing oysters or duplicate dredging.

Alaska Fall Chum Season Productive

The fall Chum salmon season in Southeast Alaska — at least in the southern area—was *good,* the best in years; and the fishermen made a nice thing out of it.

The catch is believed to have run above 1,000,000 fish, for which the average price was around $1.55 each.

Most of the catch went into cans, with perhaps 80,000 cases packed, but the freezers were very active and many of the brightest fish were frozen. Despite this fact, the freezer demand was far from satisfied, and anything which could qualify for Bright Falls or Silver Bright classification was avidly sought by the freezers of Puget Sound and British Columbia all through October.

The Southeast Alaska fall Chums were regarded as good specimens. Size was quite large, rarely running as high as 10 fish per case.

Best fishing for the short season was in Chomly and Moira Sound, where the seiners did exceptionally well.

B.C. Chum Prices Take Sharp Rise

A new price offer for Chum salmon made by the Fisheries Association of British Columbia was accepted by the fishermen and automatically terminated threat of a strike.

The agreement signed by the association and the fishermen provided for the following minimum prices for Chum salmon retroactive to September 1: Johnstone Straits—Fraser River including Cape Flattery, 14c a pound; all other areas, except Queen Charlotte Islands, 12c; Queen Charlotte Island, 10c.

The agreement represents an increase in minimum prices of from 2 to 5c over those in effect last year.

The offer from the companies was accompanied by verbal undertaking to pay 15c a pound for Fall Chums in the Johnstone Straits Fraser area effective October 1.

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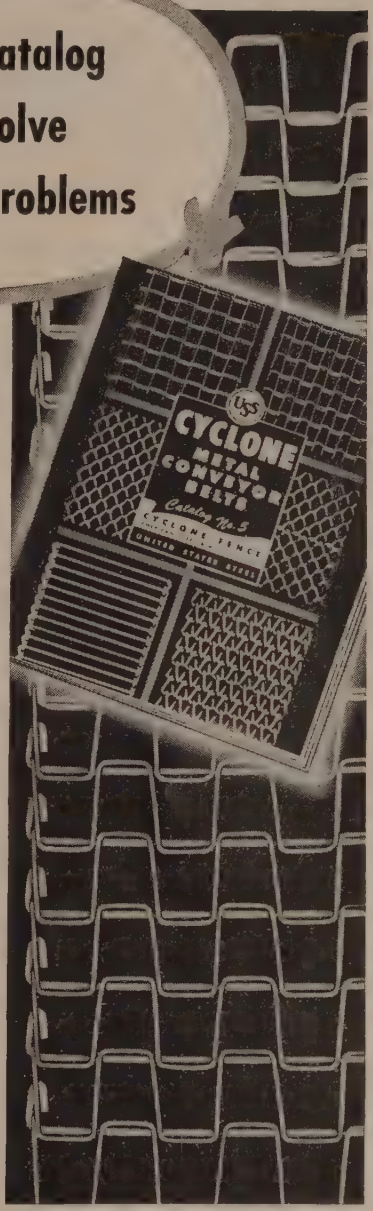

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UNITED STATES STEEL

Canada Names Mathers To Sockeye Commission

Frederick D. Mathers, Vancouver, B. C., food packer, is the new member of the International Pacific Salmon Fisheries Commission. He was appointed to succeed H. R. MacMillan, former chairman of the board, British Columbia Packers, who resigned after two years' service on the commission.

Other Canadian members of the commission are Senator Thomas Reid and A. J. Whitmore, chief supervisor of fisheries.

Although Mr. Mathers in recent years has been better known for his associations with the packing of vegetables, he has maintained an interest in the salmon industry since the 1920's. In 1932 he became manager and later chief owner of Royal City Foods in New Westminster and he is also principal owner and president of Delnor Frozen Foods, as well as a director of Catelli Food Products.

Born 60 years ago in Neepawa, Manitoba, Mr. Mathers moved to the Pacific coast with his family in 1906 and after attending school in Vancouver went overseas in World War I as a gunner, subsequently winning a lieutenant's commission. Returning to British Columbia, he worked in the salmon industry until 1932 when he joined Royal City Foods.

During World War II Mr. Mathers was administrator of processed fruits and vegetables in the Wartime Prices and Trade Board, Ottawa. He is a past president of the Canned Foods Association of B. C., Canadian Food Processors Association, B. C., division, Canadian Manufacturers Association, the New Westminster Board of Trade and Rotary Club.

Interested in sport as well as commercial fishing, Mr. Mathers' hobbies include hunting and riding, and recently he has become an enthusiastic pilot of his own airplane.

F. D. Mathers, newly appointed Canadian member of the International Sockeye Salmon Commission.

NCA Northwest Branch Ups Yonker and Jones

Walter Yonker became manager and chief examiner of the Northwest Branch of the National Canners Association in October, while Dr. G. Ivor Jones advanced to the position of assistant manager and chief chemist.

The promotions followed a shift in the branch's staff following the retirement of Dr. E. D. Clark.

Mr. Yonker has been chief examiner at the branch since the death of the late O. E. Shostrom, while Dr. Jones came to N.C.A., in 1950, following service with Food and Drug Administration and the U.S. Fish and Wildlife Service.

Japan Trading Tuna To Italy for Rice

● Commercial tuna fishing operations in the Atlantic Ocean are being undertaken this fall by the new Japanese longliner *Koun Maru,* 480 tons, which left her home port of Misaki a few weeks ago.

Her operations should not be confused with the exploratory enterprise of the 700-ton *Sagami Maru,* reported upon in these pages last month.

Koun Maru is a privately-owned vessel, the property of Azuma Boeki K.K. of Tokyo. Equipped with every fishing and navigating device developed by the Japanese, she has capacity for 330 tons of frozen tuna. Her operating prospectus anticipates four capacity trips a year, delivering her catches to Genoa, Italy, as contrasted with an average of three trips a year for longliners operating from Japan to the Indian Ocean.

While *Koun Maru's* operations plan calls for discharge at Genoa, an alternative provides for delivery at Dominica in the West Indies in the event that this seems advantageous. The entire venture is handled through one of the great Japanese international trade and finance companies and calls for a barter transaction in Italian rice, instead of direct sale of the tuna.

As in the case of the *Sagami Maru,* the *Koun Maru* will fish in the Indian Ocean en route to the Mediterranean. After this initial delivery, her operating program calls for fishing off the coast of Liberia.

Canco Grant Raises NCA Aid to $220,000

The American Can Company has provided $10,000 for its 1956 research grant to the Northwest Laboratory of the National Canners Association, Seattle.

R. C. Stolk, West Coast vice president of Canco, said that this year's grant brings to more than $220,000 the amount his company has donated to the Northwest Laboratory since Canco first began to assist the research organization in 1934.

The Northwest Laboratory is an industry-wide research center which carries out scientific tests for Alaska, Oregon and Washington canners of salmon and other seafoods, while at the same time serving as a central quality control and inspection center under the industry's "better salmon control plan".

Canco's 1956 grant-in-aid comes at a time when the National Canners Association has just purchased a new building in Seattle to consolidate its local offices and laboratories at one central location.

NFI Urges Antibiotic Action

● Stepped-up efforts to speed the approval of the use of antibiotics to provide better fish for the American public is being advocated strongly by leaders of the National Fisheries Institute, it was indicated at the regional meeting of the Pacific Northwest area, held in Seattle Oct. 2 at the time of a visit of Frank Wilkisson of New York, national NFI president, and Charles E. Jackson, Institute general manager.

In the east some of the regions are urging that the NFI throw its full weight behind an effort to advance the coming of antibiotics on a sound and permanent basis.

E. A. Ruthford, chairman of the NFI national quality control committee, declared that antibiotics promised to produce "a tremendous advance" in the fish business, but that "it won't make bad fish good". On the other hand, Mr. Ruthford felt that the opportunity offered by antibiotics could be lost entirely if the potential of these products is used to over-extend operations and mask poor quality. "For all its magic, we must guard our quality", he told the NFI members.

The Seattle meeting was attended by James Pinkerton and A. Engstrom from Alaska; and by J. R. "Bob" Russell and Paul Erkins of the Snake River Trout Co., Buhl, Idaho. Mr. Russell formerly was in charge of the Seattle and Alaska office of the Bureau of Fisheries.

Manryo Netting

Needs No Preservative!

That's why a MANRYO FISHING NET is so rapidly and so widely gaining popularity in fishing circle in the world.

This photograph shows the operation of the 'Taisho-Maru', a tuna purse seiner, which belongs to The Taiyo Fishing Co., Ltd., one of the largest Fishing Companies in Japan

The net is a huge Kuralon Purse Seine of two boats type and its length is 1800m, depth is 180m, it is so huge that it would be possible to be called as a mammoth purse seine.

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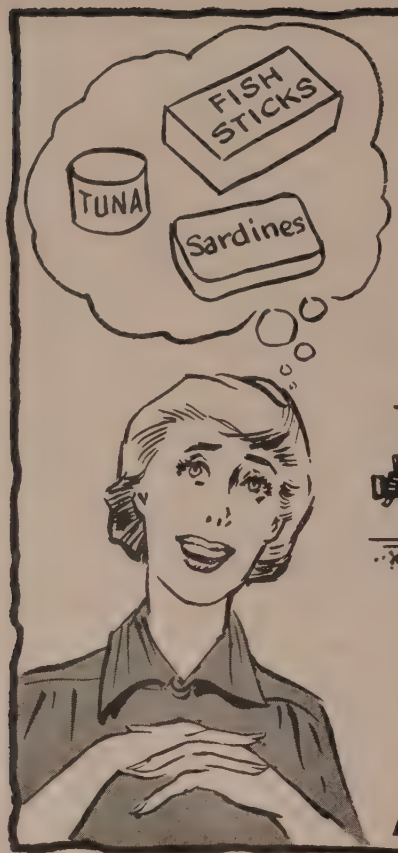


When Mrs. America goes shopping...

KEEP YOUR BRAND ON HER MIND!
BUILD QUALITY WHILE YOU TRIM COST

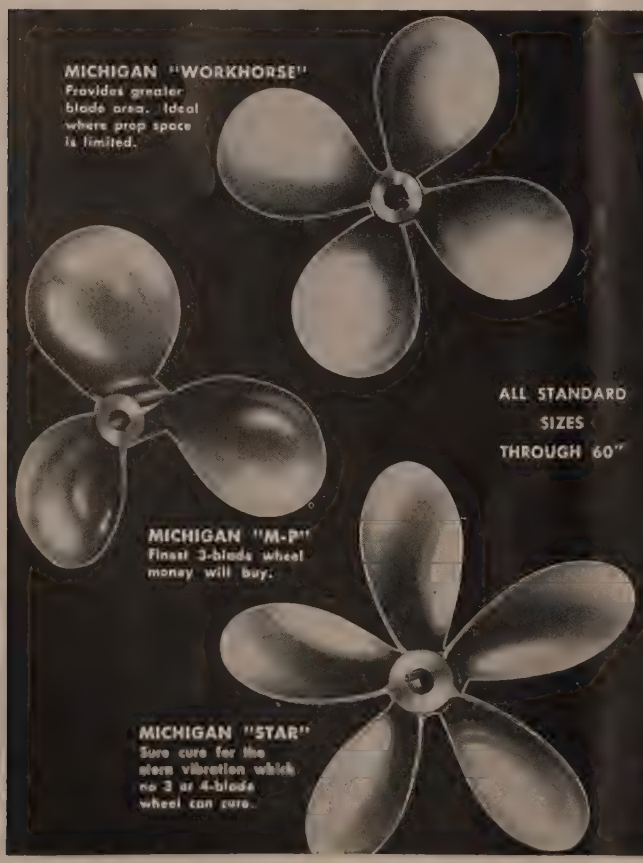
with

Call collect for fast cannon-ball service in just hours

- **World's Largest, Most Modern Corn-Soy Refinery**
- **Storage Depots on East and West Coast**
- **America's Largest Vegetable Oil Tank Car Fleets**

For Complete Information, Phone: **OIL SALES**

A. E. STALEY MFG. CO., DECATUR, ILL.


MICHIGAN "WORKHORSE"
Provides greater blade area. Ideal where prop space is limited.
ALL STANDARD SIZES THROUGH 60"
MICHIGAN "M-P"
Finest 3-blade wheel money will buy.
MICHIGAN "STAR"
Sure cure for the stern vibration which no 3 or 4-blade wheel can cure.

Here's the Perfect Prescription for Better Performance!

Every craft presents its own individual propulsion problems. If you want yours solved to perfection, if you want to make your propeller dollars go much further, see your Michigan Wheel dealer or write to us for a propeller analysis form and let our propulsion experts recommend the wheel that exactly matches your power plant and hull. MICHIGAN HAS IT . . . a wheel that will give you smoother, more economical performance than you have ever enjoyed before . . . one that is cast of our famous "MICHALOY-K" and, therefore, will last two or three times as long as one of ordinary bronze. Don't delay, do it today.

MICHIGAN WHEEL CO.
GRAND RAPIDS 3, MICHIGAN

South California Prances In National Fish Parade

● The Los Angeles area fish trade, working through the Southern California Fisheries Association and representatives of the National Fisheries Institute, had an outstanding program for Southern California Seafood Week, which coincided with the National Fish Parade, October 29 to November 3.

The Association has cooperated with Sunkist lemon growers in advertising and publicity.

The determination of the Los Angeles area seafood merchandisers to

J. J. Camillo

Aldo Casaretto

make Southern California Seafood Week the best-ever was due to various individuals and firms, among them Aldo Casaretto, regional vice president of NFI, serving as over-all chairman of the Southern California seafood week; retiring president, Glen R. Baker, to whom much credit goes for the successful promotion of seafood week in the Los Angeles area; Louis Vitale, Los Angeles Smoking and Curing Company, the association's new president. Bart Ghio, the association's secretary, and long associated with the fisheries was active, as was Leo Pearlstein, public relations, and John DiMassa, the association's treasurer.

Other firms and individuals working to make Fish Parade a success in the Los Angeles area, and whose owners or representatives attended the meeting, include R. M. Sloan Company, Rupert Fish Company, Quality Col-Pack Company, Los Angeles Smoking & Curing Co., Paladini Seafood Co., Fish O' the World; Certi-Fresh Foods, W. A. Burke Co., Western Fish Company, Mercado Seafood, Inc.; Massie Brokerage Co., Santa Monica Seafood Company; San Kenteen Corporation; E. C. Jack Brokerage Company; Olympia Oyster Company (B. L. Taylor); Pacific Coast Oyster Growers Association; Wilbur-Ellis Company; Koulouris & Casaretto Company; Hunter & Foland of Eureka; Seven Seas Fish Company; Louisiana Fish Company; National Seafoods Company; Pacific California Fish Company; California Fish Canners Association; Southern California Trading Corporation; Leonard A. Dunagan Company, Glen-Webb & Company, Tri-Sales Company.

Reinke & Amende Inc.; Valley Ocean Products; Anchor Seafood Corporation; American Fish Company; Worldwide Brokerage Company; Baker-Johnston Company; Dewey Mayes; Taiyo-California Inc.; and Orica Trading Company.

● Representatives of the fish industry in San Diego worked hard together on "San Diego Seafood Week". J. J. Camillo, who is regional chairman of the National Fisheries Institute, is working on the project. G. J. "Tod" Ghio, who is associated with Anthony's Fish Grotto restaurants in San Diego and La Jolla, and with Star Fisheries, is chairman of San Diego's Seafood Week. The Ghio and Bregante family have had a long history of association with fishing and with seafood merchandising.

San Diego fish dealers have raised more than $5,000 to promote "Fish Parade" and are emphasizing the theme, "Fish Parade starts in San Diego". Mr. Ghio was assisted in Fish Parade by Dinko Kovacevich, vice chairman, John Vitalich Jr., John Ghio, George Bissell, and Maurice Camillo, son of J. J. Camillo.

Glen Baker, retiring president of the Southern California Fisheries Association, was an active factor when Los Angeles officially proclaimed Southern California Seafood Week, completed November 3. He is a partner in the firm of Baker-Johnston.

Promotion on San Diego's first Seafood Week concentrated on radio and TV spots; on work with the restaurant level, when 15 chefs were interviewed for each chef's favorite seafood recipe; on the grocery-chain store level; and on full page ads in local papers, "San Diego's Fish Parade".

George V. Castagnola is NFI chairman in the Santa Barbara area.

Southern California's seafood week, in addition to working with Sunkist lemons, promoted seafood with Southern California Gas Company, Western Growers and Shippers Association, California Longa White Potato Advisory Board, Mrs. Cubbison's Prepared All Purpose Dressing, California Wine Advisory Board.

How Nor'west Fish Parade Generated Wide Response

● Remarkable readiness to lend a hand with the Pacific Northwest Fish Parade promotion was encountered by the Northwest Fisheries Association, which beat the big bass drum for the Parade in Seattle, Portland, Tacoma and Bellingham.

Governor, mayors, newspapers, television, radio, restaurants, food chains and retailers all took a part in telling the folks about fish.

"All we had to do was ask", said William S. Gilbert, chairman of the NFA committee at Seattle. "Everyone seemed interested in taking a part in the Fish Parade".

Other members of the Pacific Northwest committee included: Portland, Gordon Bruce, chairman; Bellingham, Myer Bornstein, chairman; Tacoma, Peter Formusis, chairman; Seattle, W. B. Hall, Charles Sellen, John Lauc, Ralph Syvertson, Mark Calvo, George Alhadeff, Robert Ennis.

The committee also had help a-plenty from Don Gooding of the

Fish Parade, Seattle—Mayor Gordon S. Clinton is cut-in on a sea chest when he signed the proclamation of the National Fish Parade Oct. 29-Nov. 3. From the left, E. E. Murray, president, Association of Pacific Fisheries; Wally Calkins; Mayor Clinton; Frank Cook; Palmer G. Olson, president, Northwest Fisheries Association.

Washington State Department of Fisheries and Roy Stevens of the U. S. Fish and Wildlife Service.

Points in the Pacific Northwest Fish Parade promotion included:

1. Governor Arthur B. Langlie's proclamation of Oct. 29-Nov. 3 as "Fish Parade".

2. Seattle Mayor Gordon S. Clinton's proclamation of the week, and televised presentation of a "sea chest" of sea foods to the mayor by Seafair "Pirates".

3. Restaurant and retail sales helps.

4. Cooperation of chain stores in using uniform Fish Parade artwork in their advertisements.

5. Spot announcements on "Market Casters' " closed circuit radio program in 125 major supermarkets.

6. Advertising in restaurant publications.

7. Radio and television programs featuring fishery personalities on fishery subjects, recipes, and menu discussions, including Capt. Matt Madsen, Mrs. W. Arnold Waring and Jack Levy.

8. Providing recipes, pictures and industry data to editors of Business, Women's Page and Food Sections of metropolitan papers.

Central California Trade Plugs Hard on Fish Parade

The fish industry of northern California, spearheaded by leaders of the Northern California Sea Food Institute, put their backs into the effort of making Fish Week in that area a success.

Al Levy, Washington Fish & Oyster Co. of California, chairman of Fish Week activities in the San Francisco Bay area, made arrangements for Mayor George Christopher, San Francisco, to issue a proclamation announcing Fish Week in that city, and made the same arrangements with Mayor Clifford Rishell in Oakland.

Pictures for newspaper publicity were to be taken, and banners were being put on fish and frozen food company trucks, and banners were being placed in food markets, along with easels for display on store counters. This material was paid for by the Northern California Sea Food Institute.

Assisting Mr. Levy in San Francisco were: Mario Alioto, F. Alioto Fish Co., and Stan Sherriff, Rupert Fish Co. In Oakland Walter Paladini, Jr., A. Paladini, Inc., and Guido DiPiano, Central Fish Co., were assisting Mr. Levy.

In the State's Capitol, Sacramento, Lloyd Turnacliff, Meredith Fish Co., assisted by Al Toffanelli, Toffanelli Sea Foods, representing the retail fish trade, and Arthur Tisdel, Retail Grocers Association, and Tom Raley, head of the Restaurant & Hotel Men's Association, arranged to have Mayor Clarence Azevedo proclaim Fish Week, and also were getting newspaper publicity.

L. Turnacliff Al Levy

Beside that, Mr. Turnacliff arranged with the Sunkist lemon people and the Wine Institute for point of sale material, in addition to the banners that were provided by the Northern California Sea Food Institute.

Tent cards for restaurant tables were being distributed, newspaper advertising by retailers was being projected, featuring halibut, salmon, shrimp, and oysters.

The Meredith Fish Co. tied Fish Week in with their own oyster promotion, and were giving away strings of Japanese cultured pearls for the best letters from housewives on why they liked oysters.

The large fleet of Meredith Fish Co. trucks which cover California's Central Valley, were appropriately decorated for the event.

Los Angeles Features Oysters, Shrimp and Bass

Bart Ghio of the Southern California Fisheries Association, Los Angeles, reports that the October seafood of the month was oysters, with shrimp and fillet of sea bass as companion items.

The association has been working on plans for Seafood Week, October 29-November 3, with what is expected to be the most intensive seafood merchandising at the retail store and restaurant level conducted in the Los Angeles area.

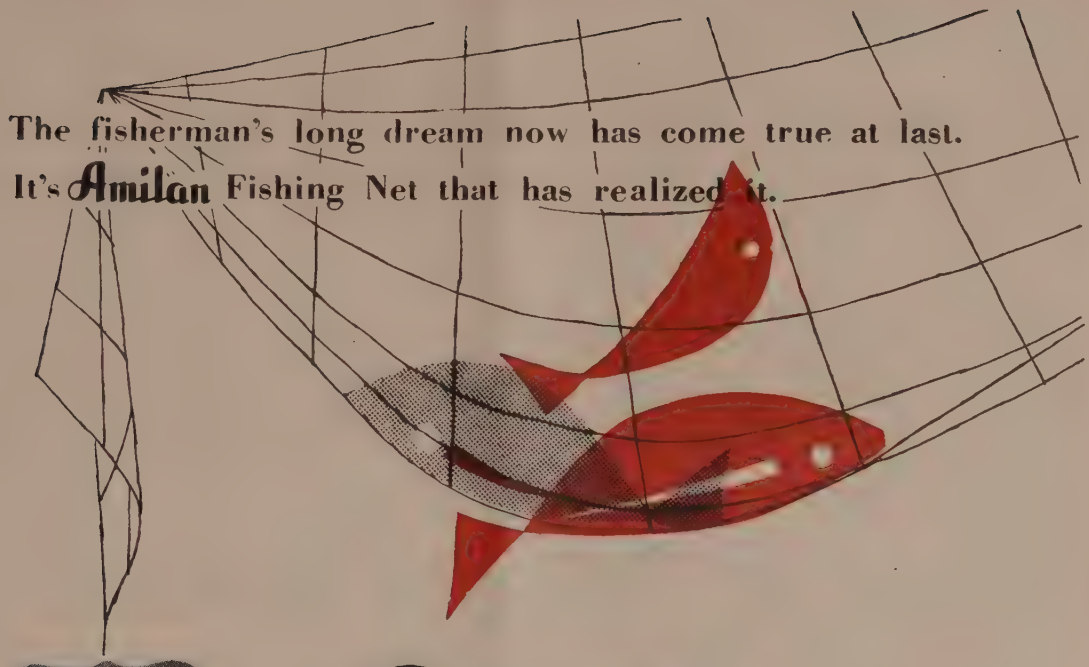
Some firms rubber-stamped Seafood Week dates on all invoices, statements and correspondence.

Many salesmen from the various seafood firms were scheduled to attend the October 9 meeting of the Association at Beverly Hills for a briefing of the plans of the Association.

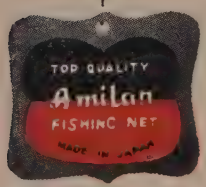
Cattolica Sole Owner Now

Cattolica & Lindwall, wholesale fish producers and dealers, Fishermen's Wharf, San Francisco, is now known as Cattolica Fish Co., according to Tom Cattolica, owner.

Vic Lindwall, former partner in the company, now has his own fish company at Morro Bay, Calif., known as Morro Bay Fisheries.



The fisherman's long dream now has come true at last.
It's Amilan Fishing Net that has realized it.



Amilan
FISHING NET

Because:

1. It brings you larger catches than conventional types of net, particularly in the case of an Amilan gill net.
2. It is strong, durable, and less liable to break. It helps retrench your repair and replacement expenses.
3. It is lighter than any other kinds of net. It means less labor force and less fuel consumption.
4. It does not easily decay. Its life is semi-permanent.
5. No drying or preservative is required. Expenses and labor for drying and treatment are saved. Spare nets are almost unnecessary.
6. Continual fishing operation is possible with no fear of decay.

The world's highest workmanship plus these unique merits is the world famous "Amilan" Fishing Net. It always carries the label shown above. "Amilan" is the trade mark of our nylon. Toyo Rayon Co., Ltd., Du Pont's exclusive licensee in Japan on nylon production.

Pamphlet "Amilan Fishing Net" is available, and dealers will be introduced upon request

The Leading Producers of Nylon in Japan

TOYO RAYON CO., LTD.

No. 5, 3-chome, Nakanoshima, Kita-ku, Osaka, Japan

Established 1926 **Cable Address: "TOYORAYON OSAKA"**

FROZEN SALMON—

Falls Scarce; Silvers Fine

Tight supply situation prevailing in frozen salmon continued tense as to the end of the production season nearer, and this in spite of vigorous bidding by buyers for freezing.

After the short, sweet Fall season in Southeast Alaska, when better-than-recent production provided some rather substantial freezings, little remained in the way of production save Puget Sound.

To presstime for this issue the Sound production of Falls had not been notable, but the quality of the Silvers had the trade talking. Volume wasn't so bad, either; and the quality of the goods was so fine that prices held high.

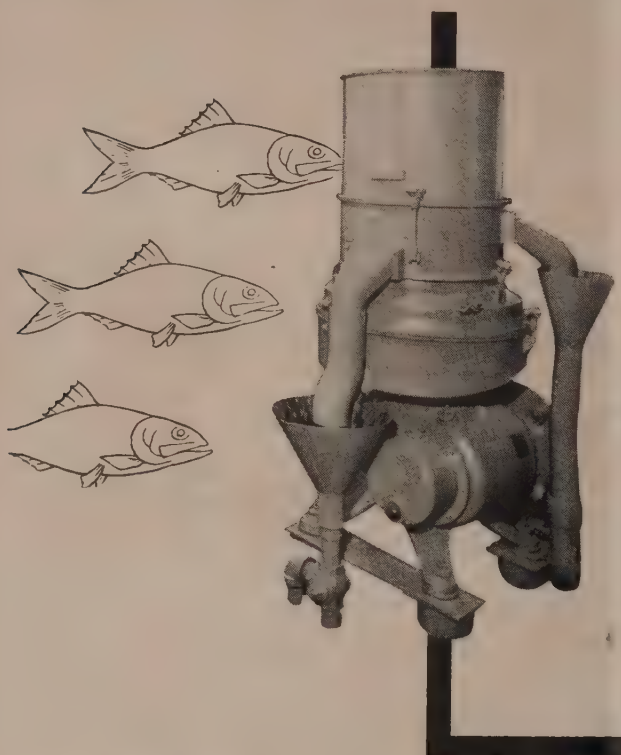
Would the Sound provide enough of these Silvers to satisfy a market which recently hasn't seemed to get enough frozen salmon of good quality? That's a question which couldn't be answered at presstime. You could, however, say that the pack includes a class of big Silvers of unusual size and quality.

Proof of this? So far as the writer is concerned, he's been eating it.

Gillnets have been running far ahead of seines in the Puget Sound landings of both Silvers and Falls. While it is probable that a flush run of Falls would see the seines catch up quickly, the numbers and distribution of the gillnetters gave them the bulk of the business to presstime.

New York market quotations on fresh salmon at presstime showed large Kings commanding 75c per lb., mediums quoted at 62-65c; and Silvers at 60-62c.

R. A. "Dick" Wiggington, formerly with Oakland Fisheries for many years, is now assistant to Ed J. Peterson, in fresh and frozen fish sales at Norfish Sales Co.



DE LAVAL

TURNS MENHADEN INTO MONEY!

De Laval "Nozzle-Matic"® Fish Oil Separators processed more than 75% of all the Menhaden fish oil produced in the U. S. in 1955...over 20 million gallons!

To produce better oil with lighter color ...lower FFA content—to operate for days at a time without shut-down for bowl cleaning...at constant efficiency throughout the run—and to make more money for your plant... go De Laval "Nozzle-Matic."

Write for details...today!

THE DE LAVAL SEPARATOR COMPANY Poughkeepsie, New York • 427 Randolph St., Chicago 6
DE LAVAL PACIFIC CO. 201 E. Millbrae Ave., Millbrae, Calif.

DE LAVAL SEPARATOR COMPANY

The PAK-SHAPER

PREFERRED BY LEADING TUNA CANNERS!

Introduction of the PAK-SHAPER in 1949 developed in tuna canning a greater mechanization than had come about in 30 years of previous growth. Subsequent experience has proved its value to the industry. A large percentage of major tuna operators now employ the PAK-SHAPER.

The PAK-FORMER, designed exclusively for Chunk and Grated Style Pack, is now available to the tuna industry under similar terms as the PAK-SHAPER.

For Complete Information Write to

E. H. CARRUTHERS CO.

P. O. Box 1322, Warrenton, Oregon

Tuna Promotion Foundation Is Organized by Japanese

Creation of the International Tuna Association to conduct an advertising and market development campaign for tuna of Japanese origin was undertaken in Japan this fall. This agency, whose present name is a provisional one, will operate as a foundation financed jointly by the Japanese government and the tuna industry.

This action supplants a 1955 proposal for a joint enterprise in which the Japanese and American tuna industries would cooperate in the development of the full potential of the American market for canned tuna.

It is proposed that the Japanese government and tuna industry each provide 75 million yen for the new organization, president of which is Tsunejiro Hiratsuka, chairman of the Tuna Trade Planning Council.

Possibility that the International Tuna Association and an organization of American operators yet might join forces was seen in proposals for a conference of the two interests next February. Such a meeting is known to be under discussion in correspondence between Mr. Hiratsuka and Charles R. Carry, executive director of the California Fish Canners Association.

Federal Fisheries Loan Funds Are Now Available

Fisheries loans out of the $10,000,000 fund established by Congress last summer became available October 22 with the entering into effect of regulations prescribed by Secretary of the Interior Fred A. Seaton.

Loans may be made for "financing or refinancing of operations, maintenance, replacement, repair, and equipment of fishing gear and vessels, and for research into the basic problems of the fisheries."

The regulations provide that loans cannot be used for "any phase of a shore operation." They are available only on proof that the "credit applied for is not otherwise available on reasonable terms."

Borrowers are required to furnish "security or other reasonable assurance of repayment." Rate of interest is fixed at 5%, and the maximum term of the loans is 10 years.

Canco Opens Salem Plant

New plant of the American Can Co. at Salem, Ore., was dedicated in October.

R. C. Stolk, West Coast vice president for Canco, headed the dedication party which assembled to christen the 135,000 square-foot structure, capable of turning out more than 240 million metal containers per year.

. . . if you're betting on netting

ADAMS' BEST

Put your money on ADAMS BEST®. Here is netting that is manufactured from highest quality fibers, blended and balanced for uniformity, strength and maximum service. Ask for netting by name: Adams Best Double Knot Linen and Bonded Nylon, Adams® Cotton Netting, Adams Nylon Gill Netting and Adams Bonded Nylon Seine Netting.

THE LINEN THREAD CO., INC.

PACIFIC COAST DISTRIBUTORS

A. D'Acquisto & Son
Box 670, Municipal Wharf
Monterey, California

Seaside Supply Stores Inc.
803 S. Palos Verdes Street
San Pedro, California

Englund Marine Supply Co.
Foot of 15th Street
Astoria, Oregon

Seattle Marine & Fishing Supply Co.
Pier 59, Foot of Pike Street
Seattle, Washington

Nuttall-Styris Co.
825 Columbia Street
San Diego, California

MAKERS OF FINE NETTING FOR OVER A CENTURY

How Monel helps Aquarius deliver and store fresh, lively anchovies

Purring like a kitten, 48-foot Aquarius glides home, tanks loaded with anchovies. Everingham Bros. of San Diego, operators of bait barges, own her. Mauricio & Sons built her . . . fitted her out for Seagoin' service with a 2″ Monel nickel-copper alloy shaft. Why Monel? Because it withstands shock, impact. Resists whipping. Resists wear and corrosion. Spares bearings. Once alongside bait barge...

Fish fin-flop into receivers just as lively as the moment they were netted. Now's a good time to see the Aquarius' hull close up. It's *completely* and *permanently* fastened with Monel Anchorfast boat nails and Monel screws that are strong and tough . . . will stay tight . . . don't corrode away. (Her fresh water tank? Monel, of course.) Once bait has been unloaded, off goes the Aquarius for another catch. Meanwhile . . .

Monel 2x2 wire mesh holds bait in receiver. Because cloth resists sea water corrosion, Everingham Bros. can keep it in the water permanently. Fouling and marine growth? A monthly wipe solves that. In jig time. Cloth resists wear and tear too, will hold catches year after year—another proof of Monel economy.

Remember: for long life and economy you can't beat Monel. If metal equipment fails on your boat, specify Monel nickel-copper alloy replacements.

Better still, think of Monel before replacement. Make sure it's in the boat you build. Look for it in the boat you buy. It's the true Seagoin' metal!

The International Nickel Company, Inc.
67 Wall St., New York 5, N. Y.

Monel *". . . it's the Seagoin' metal"*

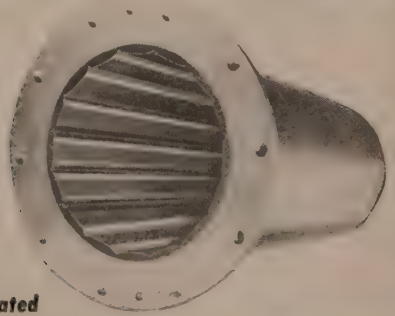
Monel, Anchorfast, and Seagoin' are registered trademarks of The International Nickel Company, Inc.

B.F.Goodrich *Cutless* BEARINGS
PROPELLER SHAFT

ON THE PACIFIC COAST

WISE FISHERMEN CHOOSE CUTLESS BEARINGS FOR PERFORMANCE AND ECONOMY

If you fish for a living you know the importance of dependable propeller shaft bearings. The kind that gives years of trouble-free, QUIET operation. The kind that saves shafts and keeps boat out of drydock. That kind is CUTLESS—the soft rubber, water lubricated bearing —the bearing fishermen depend on to keep them fishing.



Soft Rubber Water Lubricated

Tuna clipper Cabrillo, built by National Steel and Shipbuilding Corp., San Diego, uses Cutless bearings.

Cutless Bearings Improve the Performance of Any Vessel!

Buy them from your favorite Marine Supply House or Ship Repair Yard when you haul out. Large west coast stocks, popular sizes. Factory stock to 10-inch shaft size available overnight by air.

LUCIAN Q. MOFFITT, INC.
AKRON 8, OHIO
Engineers and National Distributors

FOOD FISH MARKETING

Section of PACIFIC FISHERMAN--

News and Views of National Trade in Fish and Shellfish

November, 1956

1956 Tuna Sales Pace Fastest Ever For California Industry

• Tuna sales by Southern California canners during the first nine months of 1956 were the highest in the history of the industry.

Price-wise, tuna was cheapest at the consumer level than it has been since World War II.

Sales during the first three quarters ran more than 1 million cases above like period in 1955.

Total sales of more than 9 million cases are anticipated for 1956.

• These are the factual results of a carefully considered analysis of data by the California Fish Canners Association, which reports further that comparison of canned tuna and general food prices in the cost of living index, released by the Department of Agriculture, shows that canned tuna prices have dropped 21.7% below the average price on all foods on the index between the 1947-1949 base period of last July, and 23.9% below the entire consumer price index for the same comparable periods.

Advertised brands in the chunk pack have ranged recently from "five for $1.00" to 21c, 25c and 29c. One chain store label, chunk, 6-oz., has been selling for 19c.

Although the case price of advertised and private label brands has been lower than for many years, it is reported that several canners in the California area have put through a price increase ranging from about 50c on chunk, 75c on solid and $1.00 case.

Charles R. Carry, executive secretary of the California Fish Canners Association, points out: "The Southern California tuna industry, which accounts for 85% of the overall domestic production, is one of the most highly competitive in the entire food industry. A glance at the struggle for markets makes this fact instantly apparent, and is, to a large extent, responsible for low tuna prices.

"Also, fishing has been good this year, with the result that inventory is seasonally high. Although sales are at their greatest peak, we are also canning at an all-time high, so that ample reserve stocks are assured. This reserve supply points to retail price levels advantageous to the consumer."

• New Promotions Planned

The effect of National Tuna Week (in September) on movement of canned tuna inventory could not be estimated as this issue of PACIFIC FISHERMAN went to press. However, already the California tuna industry was working much in advance of the Lenten season on promotion on the use of tuna in connection with Carnation evaporated milk and macaroni, and other related food products.

Several months ago, it was proposed that Japanese exporters of tuna, canned and frozen join with producers and canners in the United States to develop a joint advertising campaign of the sale of tuna on the consumer level. This has not come to fruition, but it is reported that the Japanese industry has appointed an advertising agency in Japan to handle sales and advertising of Japanese tuna in the United States.

Fish Prices

(As quoted at presstime by the U. S. Market News Service.)

	Per Case
Tuna—Advertised Brands:	
Wh. Mt. fcy. No. ½ 7 oz. 48s	$15.00-15.25
Wh. Mt. chunks No. ½ 6½ oz. 48s	13.50-14.00
Light Mt. fcy. No. ½ 7 oz. 48s	13.75
Light Mt. chunks No. ½ 6½ oz. 48s	12.00
Grated No. ½ 6 oz. 48s	7.50- 8.00
Tuna—Buyers' Labels:	
White Mt. fcy. No. ½ 7 oz. 48s	13.00-13.50
White Mt. chunks No. ½ 6½ oz. 48s	12.00-13.50
Light Mt. fcy. No. ½ 7 oz. 48s	11.00-11.50
Light Mt. chunks No. ½ 6½ oz. 48s	9.75-10.00
Light Mt. chunks No. ½ 6 oz. 48s	9.00- 9.50
Grated No. ½ 6 oz. 48s	7.50
Anchovies:	
In tom. sauce (5 oz.) 100s	5.50- 6.00
In tom. sauce (1 lb. oval) 48s	6.50- 7.00
Mackerel:	
Pacific No. 1 tall (15 oz.) 48s	6.25- 6.50
Jack No. 1 tall (15 oz.) 48s	5.75- 6.00
Sardine:	
In tom. sauce (1 lb. oval) 48s	7.50
In brine, No. 1 tall (15 oz.) 48s	5.50
In tom. sauce, tall (5 oz.) 100s	7.25- 7.50

19 Japanese "Windows" For Tuna Exports

There will be approximately 19 "windows" through which Japanese canned tuna exports will move to the United States.

This trade term, which could perhaps be translated better as "outlets," refers to the trading firms authorized to conduct such export business.

Hitherto there have been only 8 such firms; and efforts have been made to secure authority for as many as 40 concerns.

In this controversy the Japan Export Canned Tuna Manufacturers Association and the Japan Canned Food Exporters Association have been ranged on opposite sides of the question.

After extensive negotiations, it has been determined that licenses will go to firms which have records of handling in excess of 20,000 cases, with the provision that a right can be created by acquiring and combining historic trade records.

Thus there will be the 8 original firms, plus 4 with ample historic rights, plus 7 which have acquired a position by combining their rights with those of others.

SALMON MARKET—
How 3 Sellers See It

● "More people in our growing nations, each with more money to spend. A static supply. This is the classic pattern of inflation, reflected in the price of salmon. We have a critical problem of stretching our supply over the market."

● "Red talls are the mystery of this market. Fifty percent more to sell, at a price $2 higher than last year, and yet they are the most popular salmon item of all today, with the smaller factors already cleaned out".

● "Salmon market enters November in a condition of suspended animation. The first round of shipments has been made. The second isn't due to start until the last days of December. Prices are firm to firmer".

These three quotations are typical of the responses to *PF's* current market inquiries. They came from three wholly different sources:

The first is the sales manager of a large Canadian house.

The second is the sales manager of one of the larger American canning companies.

The third is an independent Seattle salmon broker with substantial sources of supply.

Their views may be accepted as thoughtful analyses of the situation, well diversified.

● Details of some of the discussions indicated increasing tightness of Tall Chums, for reasons somewhat obscure, as the Alaska supply at least is up to normal. British Columbia is short on this grade, and at time of writing there appeared little prospect for Puget Sound to contribute in normal volume, due to light fishing and active interest in Falls for freezing.

Higher prices just haven't seemed to exert the braking pressure on salmon movement normally expected.

Supplies of 4-lb. salmon seem very limited indeed, with cases of a dozen fours Medium Red quoted at $31, a dollar above the same seller's figure on 48 talls. Likewise he quotes 4-lb. Pinks at $25, full $2 over his figure on talls Pink.

At presstime some of the few uncommitted stocks of Pink talls were being held at an asking price of $24, marking an upward tendency. There was no knowledge of sales being consummated at this figure, but it was commanding some interest.

Oyster Soup Prices Clipped Right in Two

One of the sharpest price revisions on record for Pacific canned sea foods occurred in October when principal producers of Pacific canned oyster soup marked the price of a case of two dozen E.O. cans from $5.50 to $2.75.

"Market extension" was given as the reason for the spectacular revision, which some close to the picture expected to be of a temporary character.

While several oyster operators in the Pacific Northwest sell canned oyster soup, the two principal packers are Coast Oyster Co., with plants at South Bend, Wash., and Eureka, Calif., selling under *Willapoint* and *Van Camp* brands; and Hilton Sea Foods Co., selling under *Hilton* brand.

Seattle Market

Prices quoted by Seattle brokers at presstime for good quality stocks f.o.b. Pacific Northwest terminal points in cases of 48 cans each.

Alaska Salmon	
Sockeye, talls	$33.00-34.00
Sockeye, halves	21.00-23.00
Chinook, talls	29.00-30.00
Chinook, halves	17.50-18.50
Pink, talls	23.00-24.00
Pink, halves	12.50-13.50
Med. Red, talls	29.00-30.00
Med. Red, halves	16.00-16.50
Med. Red, quarters	9.50
Chum, talls	21.00
Chum, halves	11.50-12.00
Puget Sound Salmon	
Sockeye, halves (m.f.)	23.00
Sockeye, halves (h.f.)	24.00
Sockeye, quarters	13.00

British License Japanese Salmon Imports Early

Announcement by the British government that exchange licenses for 1.5 million pounds sterling would be available from October caught the Japanese by surprise because of the marked contrast with the previous season. The early action this fall is taken as indication of appreciation by the British trade of the shortness of available supplies.

They Add Up To A Lot of Sales!

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THERE'S A GROWING Demand for

Quality Pink Salmon
KELLEY-CLARKE CO.
2460 6th Ave. S.
Seattle 4, Washington

California Tuna Operations — September, 1956

(Approximate figures for tonnage and total case pack)

	San Pedro	San Diego	Combined
Species	Tons	Tons	Tons
Yellowfin	4,249	1,787	6,036
Skipjack	2,768	3,866	6,634
Bluefin	1,320	4	1,048
Bonito	6	9	15
Albacore	2,223	1,044	3,267
Yellowtail	2		2
Total	10,568	6,710	17,278
Pack in cases	504,147	298,373	802,520

De-Veined, peeled shrimp is a new item packed by Marine Products Company in retail and institutional packages, under the **Ocean Garden** brand. The Marine Products line includes raw frozen, breaded and fried shrimp, under **Southern Star, Southern Seas** and **Ocean Garden** labels.

1956 Mild Cure Pack Ranks With Smallest

Splitting during the fall season added only a few hundred tierces to the 1956 mild cured salmon production.

While trade sources had not tallied final figures at presstime, it appeared altogether probable that the 1956 pack, including Silvers, did not exceed 6,000 tierces.

Thus, with the single exception of the mid-war year of 1943, the 1956 pack is sure to be the smallest the industry has ever recorded. Records of *Pacific Fisherman Yearbook* show that, save for 1943, the mild curing of no year since 1900 has fallen below 6,000 tierces.

At that, 1943 produced 5,889 tierces, and some observers believed that the final total for 1956 *might* not exceed that figure.

In short, the pack is short—the shortest in many years.

Smokers will draw much of their supplies from the freezers, of course; but even there the available supplies of frozen salmon are limited.

De Bussieres Heads Curtis & Tompkins Firm

Hugo de Bussieres, connected since 1923 with Curtis & Tompkins, Ltd., San Francisco chemists, samplers, bacteriologists, and vitamin assayers, has been elected president of the company.

Mr. de Bussieres worked for many years in the analytical laboratories of the firm and when the California fish industry expanded its operations to Oregon, he began to specialize in fisheries work.

He has been general manager of the company since 1940, a post he will retain. Mr. de Bussieres ran one of the first tests in commercial fisheries laboratories on fish livers for Vitamin A. Under his direction sampling laboratories were established up and down the Coast.

The fish industry is still a prime interest of Curtis & Tompkins, Ltd.

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B. C. Salmon Markets

Prices at All-Time Peak

● Due to a combination of short supply and continued strong domestic demand, British Columbia canned salmon prices have climbed to the highest level on record during the past few weeks.

Prices FOB Vancouver for domestic and export sales are approximately as follows:

Sockeye, halves, $20 a case; Coho, halves, $16; Pink, talls, $21; Pink, halves, $11.25; Chum, talls, $19; Pink, halves, $10.25.

There has been considerable talk of a further increase. Shortage of Pinks and Chums has been particularly noticable this Winter, the Chum situation being adversely affected by two successive seasons of comparatively small catches.

"People talk of canned salmon as a luxury these days", a Vancouver sales executive told *Pacific Fisherman*. "We are not sure this is true in a relative sense, because everything else has gone up in price, but we'll probably find out during the next two months when we get the reaction of buyers to the higher prices."

Certainly there has been no resistance so far to canned salmon in the Canadian market. Packers and jobbers have been trying to maintain balanced stocks so that they will be able to keep their brand names on grocers' shelves during the Winter without too much disruption, but this will be difficult as stocks gradually decline. Because of the importance of the domestic business and its stability in recent years, most of the packers are giving preference to it and are more anxious to see it supplied than the export field, which some years ago was the dominant factor.

As previously reported in *Pacific Fisherman*, British Columbia salmon canners insured their ability to meet basic requirements of the market in Canada by importing stocks from Japan for the first time.

Japan's High Seas Crab Pack 427,000 Cases

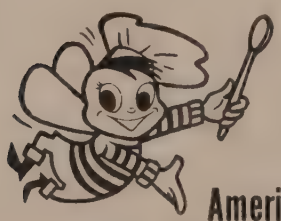
With the October return of the last of the Japanese floating crab canneries from the high seas it was officially announced that the total pack of these ocean operations for 1956 was 427,350 cases of 48 halves.

Details of production follow:

Okhotsk Sea — Four motherships, 313,000 cases; average catch per shackle, 10.34 crabs; average crabs per case, 30.5.

West Bering Sea, Cape Oliutorski area—One ship, 54,500 cases; average catch per shackle, 3.79; average crabs per case, 23.02.

East Bering Sea, Alaska—One ship, 59,850 cases; average catch per shackle, 7.33; average crabs per case, 18.03.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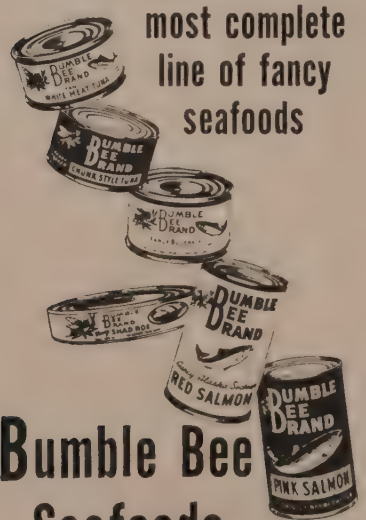

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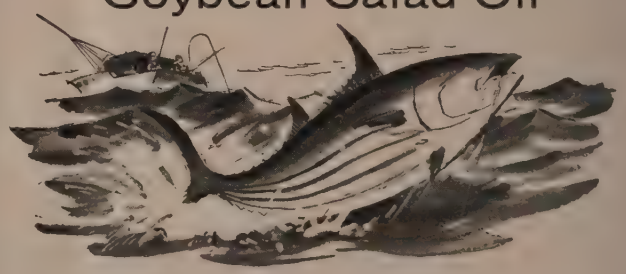
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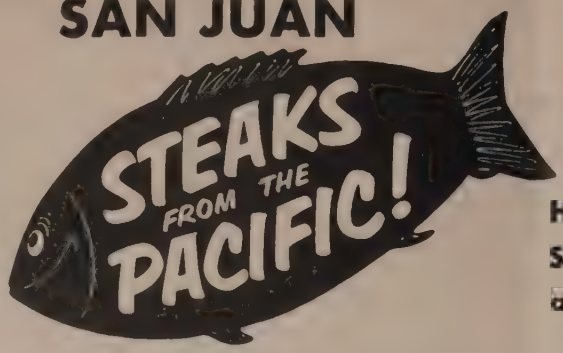

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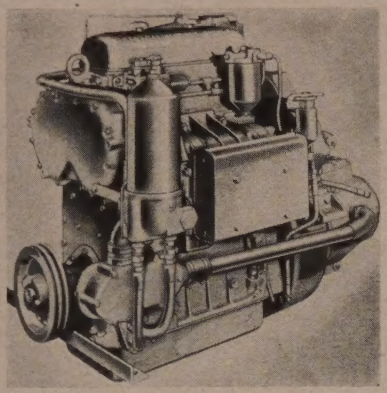


Detroit Diesel 3-cylinder unit for small boats

Detroit Diesel Engine Has New Marine Models

Two new Diesel propulsion units especially adapted for installation in small boats have been announced by the Detroit Diesel Engine Division of General Motors.

The new models are three- and four-cylinder Series 71 engines offered for the first time without heat exchangers and with through-shaft, direct-drive marine gears as standard equipment.

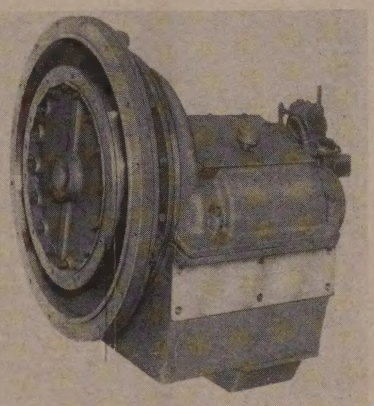
Standard models weigh 1580 and 1850 pounds, develop 110 and 151 shaft horsepower, respectively, and are available as matched pairs in both right- and left-hand engine rotation. The larger model is offered with both cast iron and aluminum block.

Francis Brink Joins Sales Staff of N-C Marine

Eldon D. Erickson, manager of NC Marine, 2500 Westlake Ave., North, Seattle, announces that Francis G. Brink has joined the organization as salesman for the company's wide range of marine equipment lines. These include Caterpillar Marine engines and electric sets and Chrysler Marine and industrial engines.

Mr. Brink is experienced in the technicalities of marine engine selling and well acquainted with the buyers in the Puget Sound area as for the past 3 years he has been employed as a salesman by another Seattle firm specializing in marine engines.

Previously, Brink, for a number of years, was employed by the Prothero Boat Co. of Seattle, as a machinist and later as a salesman.



BIG GEAR—New hydraulically actuated marine reverse-reduction gear for heavy-duty high-speed diesels in the 300-800 hp. range, just announced by Snow-Nabstedt Gear Corporation. It is available in ratios from 2:1 to 5:1. Five years of research engineering, development and testing—plus 50 years of S-N know-how—went into this Model 3971 gear.

Columbian Bronze Advances Douglas T. Abbott

Douglas T. Abbott has been appointed vice-president in charge of engineering and sales by Columbian Bronze Corporation. He has been with Columbian since 1942, as chief engineer and general sales manager. A licensed professional engineer, he is a member of the Society of Naval Architects and Marine Engineer.

Leo P. Traeger, former purchasing agent, has been named a division sales manager.

R. L. Burpee, Western regional manager for Detroit Diesel Engine Division of GM.

Detroit Diesel Ups Field Sales and Service Staffs

The Detroit Diesel Engine Division of General Motors has expanded sales and service facilities by establishing regional headquarters in six key cities—San Francisco, Chicago, Detroit, New York, Atlanta and Dallas.

Headed by a regional manager and staffed by sales, sales engineering, service and office personnel, each office will provide assistance to dealers and boat builders in working out the ever-increasing power requirements of their customers.

In charge of the western region, with headquarters at 1426 Russ Bldg., San Francisco, is R. L. Burpee. R. W. Phillips, former marine sales manager, will be in charge of the Atlanta region. L. A. Steele heads the New York region, J. C. Campbell the Detroit region, D. E. Schwendemann the Chicago region, and Erick Sutton the Dallas region.

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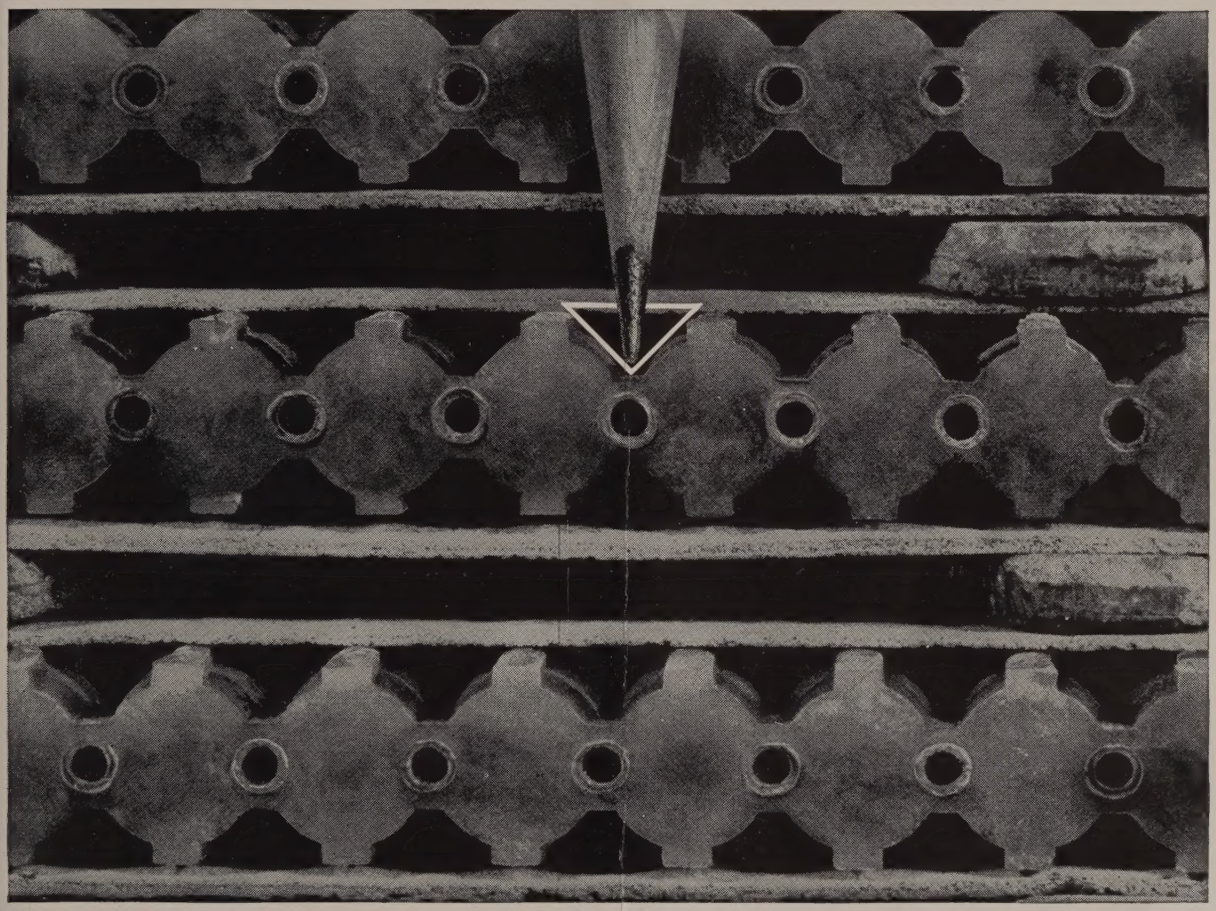

BOTTOM VIEW shows tubular construction of positive plates in an Exide-Ironclad Battery.

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BATTERY FOR MARINE SERVICE. Exide-Ironclad Model MVD. Write for Bulletin No. 5190.

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